

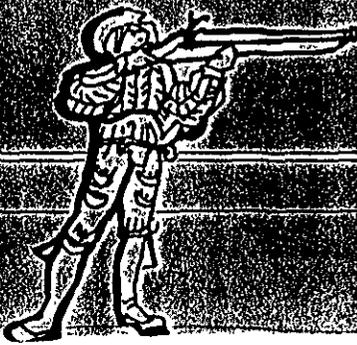
Light Infantry

The advent of the Army's new light infantry divisions has brought about much discussion on how to use these new units—and the discussion continues.

The formation of this light infantry force was based upon a stated need: to "improve the Army's capability to meet security demands within the dynamic and volatile international environment . . . a strategically responsive and flexible infantry division." To do that, the light infantry has been correctly defined as a force "composed primarily of footmobile fighters . . . organized, equipped, and trained to conduct effective combat operations against light enemy forces."

The problems squarely facing that light infantry, however, are firepower, the weight of the equipment, and the mobility of the force. There are solutions to these problems, but each must be examined carefully so that the shock value of firepower and rapid mobility is not forgotten or discarded.

The current doctrine on using a light infantry force really boils down to this: Can we get a U.S. presence into a hot spot with enough capability and "bravura" to forestall a much more dangerous situation? To examine what our forces must do, it may be instructive, in the words of J.F.C. Fuller, to "look back as the surest way of looking forward."



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First, let's go back to 4 B.C. and the generalship of the Athenian Iphicrates, because he created, trained, and commanded a new type of infantry force that wore lighter armor and carried more "firepower." Then, because the force was lighter, he brought about a change in tactics—tactics that won the day against a more heavily armed opponent—and kicked off a series of changes that led up to what we have today.

Peltasts vs. Hoplites (Equipment Drives Tactics)

Iphicrates should be considered the father of innovation in regard to light infantry forces. He saw the potential of light infantry units (*peltasts*) and used them with considerable success against the Spartans' heavy foot infantry (*hoplites*). Not only did Iphicrates learn from this some lessons about shock power and equipment weight, he also applied those lessons to his own heavy infantry force. He introduced modifications to his *hoplites'* traditional equipment, making it lighter and more deadly. And in doing so he increased his infantrymen's chances of succeeding against a more heavily armed opponent.

Before these reforms, infantry had tended to acquire heavier and less maneuverable armaments and equipment. Consider the Greek *hoplite*, for example, as he advanced against an enemy in battle: He wore body armor with metal scales on it and armbands and lower leg protectors made of bronze. He carried a shield that was built on a wooden core and faced with bronze and backed with leather; a long spear (6½-10 feet long) with a head of iron and a butt spike of bronze; and a short sword (with two-foot blade) with bronze fittings.

A heavy infantry force moving like an armored vehicle in the famous phalanx formation was probably an impressive sight. A *hoplite*, heavily armored, carried his shield on his left arm and, when in a combat formation, stood shoulder to

shoulder with his comrades. This solid wall of bronze shields, with ten-foot spears bristling out of it, was indeed formidable. But because of each man's tendency to edge behind his neighbor's shield, the phalanx had a habit of drifting to the right, which affected the outcome of many battles.

Iphicrates must have seen that this maneuver was dangerous and at times unwieldy. In light of his battle experience at Lechaeum, he introduced modifications to the traditional *hoplite* equipment, thus giving us the earliest beginnings of the light infantry force.

He replaced the heavy metal-faced shield with a smaller leather-faced one, the metal leg protectors with boots, and the metal body armor with quilted linen and leather helmet. (He lengthened the spear to 12 feet to compensate for the lighter armor.)

The Athenian general did not have too long to wait for an opportunity to demonstrate the capabilities of his new force of light infantry. During the Corinthian War, a Spartan *mora* (battalion) of 600 men was escorting a contingent of allied troops back to the Peloponnesus, when Iphicrates' new force intercepted it in the Isthmus, routed it, and inflicted crippling losses.

It can be argued that Spartan lack of foresight, combined with some bad luck, had produced this fatal battle situation. But Iphicrates had planned his own victory, a victory that vindicated his new tactical concept as borne out by his light infantry.

The efficient organizing, equipping, and arming of some Athenian heavy infantry units into a light infantry force, the *peltast*, is a historical lesson that bears careful consideration. Training and discipline are also key parts of efficiency and must never be overlooked, no matter how well equipped or armed a force may be. "Firepower" discipline is especially valuable, no matter what army or what century one discusses.



Hoplite

When real firepower came into being, the lessons of weight (armor), mobility, and tactics would become even more important.

Ashigaru vs. Samurai (Firepower Over Heavy Equipment)

The *ashigaru* versus the *samurai* is a historical example that takes place in an almost closed society consisting of warriors and warlords, merchants and farmers, all part of feudal Japan in the 16th century.

Late in that century, the Portuguese, one of the few outside traders allowed in, introduced firearms to the Japanese, an import that was destined to change the entire fabric of Japanese society by the late 19th century.

During this time, there was a situation in which political and economic gains were dependent upon military force, and it was essential that a *daimyo* (warlord) try to be a military innovator. Equipping, establishing, and training the *samurai*,

the military forces of the period, was expensive and time-consuming.

A *samurai* wore heavy, specialized armor and was armed with the *katana* (standard fighting sword), *yabusame* (mounted archery equipment), and possibly the *naginata* (a heavy sword with a long curved blade). And since the *samurai* had become a distinctive class, not everyone could even become a warrior.

In the middle of the 16th century, however, a *daimyo* named Takeda Shingen began to discipline a group of farm workers into a fighting force. These peasant troops were called *ashigaru* or, literally, "light feet."

An *ashigaru* wore no armor but was clothed in a quilted uniform. He was armed with a long lance with a grappling hook arrangement on the end. This allowed him to move quickly on the battlefield, hook an armored, horse-mounted *samurai*, bring him to the ground, and dispatch him with a sword or spear. But most important, the *ashigaru* became the first type of soldier to use a firearm, a *harquebus*, which was fired by dropping a lighted match onto a touchhole. Because it was not very accurate, several were usually fired in volleys, but it was comparatively easy to learn how to use one. It gradually replaced the bow, which took more strength to use and more training to learn, as the *ashigaru's* main missile weapon.

As the *ashigaru* became better armed and trained with their *harquebuses*, the mounted *samurai*, for protection, became heavier and less mobile.

The most difficult task for the armor maker of this period was to build armor that could protect the *samurai* against both *harquebus* shot and arrows. Bullet- and arrow-proof armor did not come soon enough or cheap enough, though, so *samurai* warriors just compensated by adding another layer to their existing lamellor armor.

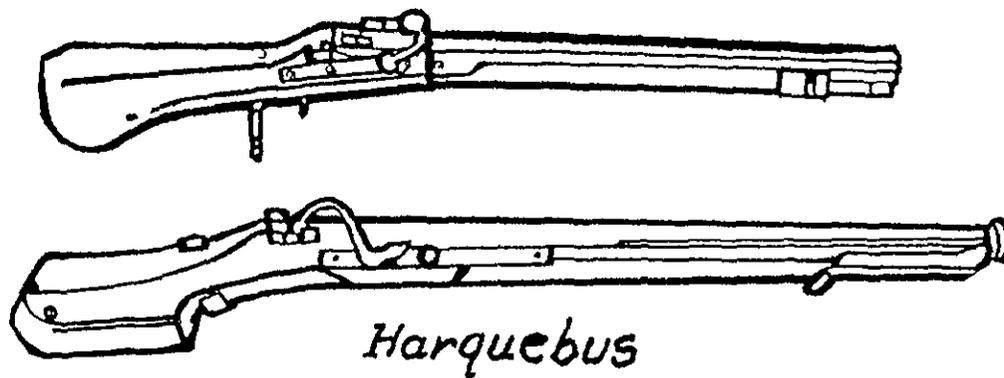
But there was another powerful warlord at the time who began to realize the benefits of integrating *ashigaru* soldiers and *samurai* into one army. He was the *daimyo* Nobunaga, a man noted for his fortress building ability. By 1575 he had organized a 30,000-man army of *samurai* and *ashigaru*. In his war for territory against the Takeda clan, he used his "light feet" infantry successfully against heavy mounted cavalry.

Nobunaga's defeat of the Takeda cavalry and the manner in which he directed it became a turning point in Japanese military history. Nobunaga caught up with the Takeda clan's army at the city of Nagashino. That battle is described by Stephen P. Turnbull in *The Book of the Samurai* as follows:

[Nobunaga] chose a strong position from which he could receive the charge and instead of advancing toward the castle to meet the Takeda, he constructed a palisade across the broken ground to the foot of Mount Gambo, leaving a narrow stream between him and the enemy. Gaps were left in the palisade every 50 yards or so for counterattack. From his 10,000 ashigaru harquebusiers, he detached the 3,000 best shots, and lined them up behind the palisade in three ranks. This was probably the first time that ashigaru had been given such a prominent place in any battle, demonstrating very clearly the discipline [of the ashigaru]. . . As the Takeda charged in, the ashigaru brought the cavalry crashing down with volleys of harquebus fire.

Turnbull says that most accounts of the battle credit Nobunaga with "ordered firing according to rank, one group fir-





ing while the other reloaded." Such an arrangement would put Nobunaga's army a good "hundred years ahead of any other army in the world."

The battlefield of Nagashino demonstrates how a technological innovation (the harquebus), coupled with changes in fighting organizations (the *ashigaru*) and tactics, can be a decisive factor in victory.

Light Infantry vs. Infantry (Equipment and Tactics Drive Maneuver)

If light infantry is a concept driven by technology, it is also a concept driven by the need for rapid troop movement and the ability to sustain a force on the move or engaged in battle. This is true not only for today's U.S. Army but also for the Army of the American Revolutionary War period of 1775-1783.

From 1750 to 1800, armies were subjected to the trends brought about by technology (the flintlock musket), by rapid troop movement in battle (Frederick the Great's rigid troop drill techniques), and by logistics (Frederick again, breaking dependence on depots). These three areas began to receive so much careful study and refinement that they eventually became doctrinal.

During the 50-year period too, doctrinally, maneuver—the tactical manipulation of fire and movement on the battlefield—became the predominant military characteristic. But the use of the flintlock musket and its increased rate of fire created a radical new problem. The rigid discipline of the early 18th century in Europe became even more stringent under Frederick. He turned the individual Prussian soldier into a robot. His units could rapidly change directions or shift into battle formation from marching column or vice versa, and fire by platoon replaced volley fire by larger formations. This led to a mobile infantry that could be shifted and massed at will on the battlefield to produce fire and shock action at a chosen spot.

Then, as armies were beginning to grasp the firepower lessons of the disciplined platoon firing repeated, lethal volleys from their smoothbore muskets, the rifle came into being.

Originally a sporting weapon, the grooved-barrel rifle achieved far better accuracy and range than the smoothbore musket. It took a long time for infantrymen to adopt the rifle into the arsenal, but it should not have. In Germany, the huntsman—the *jaeger*—had used it for nearly 200 years.

In our own country, German craftsmen in Pennsylvania had been turning out a lighter and longer-barreled version of the countrymen's weapon for the American woodsmen. This rifle had a slower rate of fire than the musket, because each bullet (wrapped in a greased patch) had to be hammered down into the grooved barrel with a mallet. It was an individual arm, carrying no bayonet, but as a result of its use in the American Revolution, the rifle and the rifleman became an element in warfare.

Furthermore, out of the French and Indian War also came the use of the *jaeger* force, for *jaegers* had mobility, or maneuver by another concept. Skirmishers, light infantry troops covering the front of the field of battle, had always been present in one way or another but, because of their slow rate of fire, were not part of the regular army force. (For a more complete discussion of *jaeger* infantry, see "Light Infantry in Perspective," by Steven L. Canby, *INFANTRY*, July-August 1984, pp. 28-31.)

Before 1756, European armies had considered the light infantry "expendable" irregular troops, but as a result of the defeat of British General Edward Braddock on 9 July 1755 in the battle of the Monongahela by 900 French and "irregular" troops, changes were made in the British Army. These changes led to the establishment in each foot regiment of a light infantry company. This light company was usually detached from its battalion for covering the advance of heavy infantry or for some other special mission.

The historical significance of examining how light infantry found its way out of heavy infantry is the discovery that light infantry could defeat a European trained and superbly drilled maneuver infantry force. The light infantry, given enough disciplined and accurate firepower from rifles, and protected by woods or hilly terrain, could defeat a numerically superior, formation maneuvering troop force. The U.S. Army proved

it on many occasions during the Revolutionary War.

One final refinement that gave light infantry a further break from the rigid school of maneuver was Frederick's logistical systems. Breaking away from the slavish dependence on depots, Frederick devised the system of having the individual soldier carry three days' rations in his knapsack, with eight days' bread supply carried by the regimental trains and a month's supply by the army's trains.

Frederick also had a fairly well organized transport system linking his armies to such depots as he did organize. Furthermore, his troops were trained and prepared to live off the land. Most important, his light infantry forces could move quickly, carry provisions organically, and hold their positions until the supply trains and heavy equipment and troops could be moved up.

These innovative ideas, though created piecemeal, would be demonstrated vividly as a whole by a German general in World War I who was innovative enough to drive the Allied Army almost back to Paris.

Sturmabteilungen vs. Static Infantry **(Maneuver Drives Equipment and Tactics)**

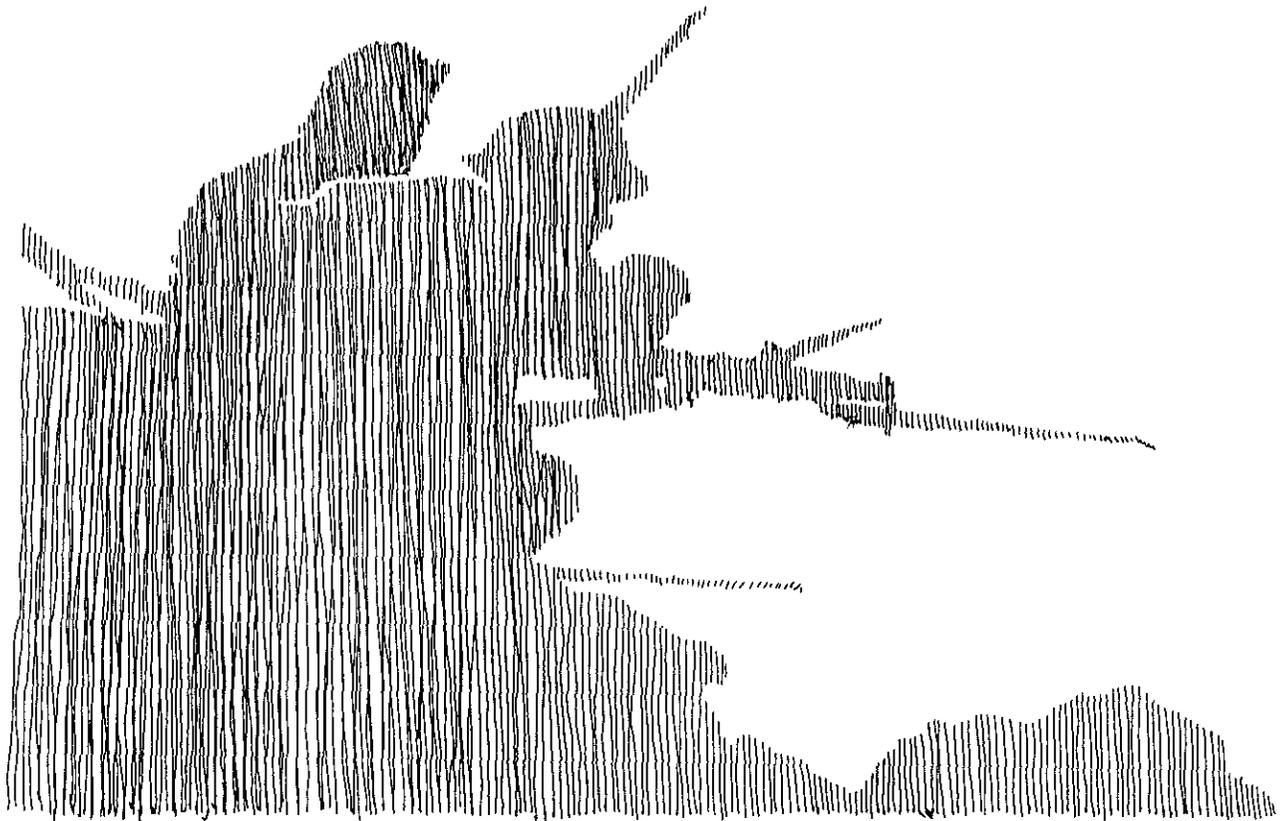
On 1 September 1917 German Lieutenant General Oscar von Hutier's specially trained *sturmabteilungen* (storm troops) attacked the northern anchor of the Russian Front in a new way. This was the first application of what would later become known as "Hutier tactics." The Russian Twelfth Army streamed eastward in panic, taken completely off guard by the sharp assault of Hutier's trained light infantry battalions.

Maneuver, or more correctly the Great War's distinct lack of maneuver, called for innovations in offensive tactics. General Erich von Ludendorff, commanding the German armies, depended on highly specialized shock formations trained in a wave method of assault—the same method General Hutier had experimented with during the Riga campaign in 1917. So before the start of his March 1918 Channel Port offensives, Ludendorff, knowing that his scarce manpower resources could not be wasted, decreed that, instead of sheer weight, Hutier's newly developed (and proven) tactical skills would be used to defeat the entrenched enemy forces.

Units in the line, as well as those moving from the Eastern to the Western Front, were combed of their youngest, fittest, and most experienced soldiers, and these were formed into storm trooper units. Armed with light machineguns, light trench mortars, and flamethrowers, they were to cross the trench lines, bypass centers of hard resistance and machine-gun posts, and, if possible, break through to attack the enemy artillery positions.

For these fast-moving tactics to be successful, Hutier's storm troopers were made physically light and given more firepower. They carried Bergmann 9mm submachineguns with snail-type magazines and stick bombs in large canvas grenade bags.

Every German army in the field soon had a main body of storm troopers officially designated a battalion. There were 18 battalions of storm troopers by the start of the Ludendorff offensive campaigns of 1918. When the offensive was launched on 21 March 1918, the German Army achieved surprising success using the Hutier tactics employed by these fast-moving troops.



These new tactics differed in two ways from the infantry tactics previously used by armies on the offensive. First, the attacking storm troopers bypassed strongholds and enemy units at the flanks, leaving the destruction of these elements to the second wave, and advanced boldly by infiltrating small groups until they reached the enemy artillery. (To increase their firepower, the storm battalions were equipped with specially designed light artillery batteries and mortars.)

The second change in tactics was that the storm troopers were followed by battle units consisting of infantry, machine-guns, trench-mortar teams, engineers, sections of field artillery, and ammunition carriers. The primary job of these units was to attack defended positions, repulse any counterattack, and generally overwhelm the already dazed enemy.

Spectacular results were achieved during the opening days of the March offensives. General von Hutier's Eighteenth Army gained 38 kilometers in four days, crushing General Sir Hubert Gough's Fifth British Army, taking 50,000 prisoners, and coming close to driving a wedge between the British and French fronts. The second part of the offensive, launched on 9 April, was just as successful. German storm troopers, backed by battle units, advanced some 20 kilometers in one day, the longest surge made on the Western Front since the beginning of trench warfare.

Although the tactic was successful, it did not have what it needed to sustain the German offensive. (Other offensives were tried unsuccessfully by an army exhausted by four long years of trench warfare.) The lessons are still valid, however, on how a light infantry force whose men were footmobile and individually armed with significant firepower could carry out an offensive. The Hutier experiments are still worth examining.

U.S. vs. Them

(Tactics, Equipment, and Firepower)

Whenever a discussion gets around to the structure of the combat division, the words "experience" and "experiments" probably best sum up all the changes the U.S. Army has been subjected to over the years. The period between 1918 and 1973 found the U.S. Army, and practically all other modern armies, debating furiously the status of infantry.

In the Great War, the introduction of gas warfare, barbed wire entrenchments, mines, machineguns, tanks, artillery barges, and airplanes all seemed to conspire to either dilute, change, or eliminate the infantry. In 1934 a decade of debate began, taking on a life of its own as the Army began to design "light infantry divisions." The main purpose was to increase mobility and maneuverability, an idea pushed hard in 1939 by then-Brigadier General Lesley J. McNair, commander of the 2d Division Artillery. He became the chief proponent of the reorganization and restructuring of the Army's infantry divisions.

The division experiments carried out by McNair dealt with fundamental, back-to-basics questions regarding, among other things, frontages, firepower, integration of crew-served weapons by echelon, proportion of artillery and other branches to infantry, and transportation requirements.

His chief aim during this decade of experimentation was to get the most combat power and tactical mobility at the least cost in manpower, weapons, and shipping space. How he intended to do that—and the lesson that must strike home now—is well documented by a series of hard organizational studies.

Summarized, McNair wanted light infantry forces that could concentrate combat power into offensive units that could defeat the enemy, giving each unit what it needed to conduct operations on open, maneuver-oriented battlefields. He also wanted to restrict the amount of transportation needed for strategic deployment. He was more interested, for example, in trucks that could shuttle necessary supplies and ammunition to the division during a 24-hour period than in trucks that could carry everything in one lift. Although the rifle units would not be motorized, they could become so by the attachment of six truck companies to the division.

The primary lesson learned, however, was not organizational but doctrinal: This "light infantry force" could not be effective in defending against massed armor and airpower, nor could it attack prepared defenses without a significant amount of augmentation from non-divisional assets. In the long run, the division could not conduct operations that involved high casualties—the austerity of manning in the proposed McNair division gave it practically no absorbing capability. General McNair's untimely death left the problem of a light infantry force unresolved until recently.

Summation

(Where is the Light Infantry Going?)

Where, then, does this leave the light infantry force today? What is its purpose? Against whom is it to be deployed? How do we sustain, rearm, and refuel this force? Do we have to back it up with a larger or heavier force?

The answers are hard to come by. John English's *A Perspective on Infantry* gives us some answers, but they may not be the answers we want to hear. Our own government's quest for "national security" also provides answers, because it promises us that light infantry forces will play a meaningful role in preventing low intensity conflicts and keep some "controllable crises" from escalating into "superior confrontations." But what do those words mean?

From a doctrinal viewpoint, this means that light infantry is being "organized and equipped to conduct combat operations against light enemy forces for periods of short duration" and that light infantry can be "rapidly deployed to conduct contingency operations ranging from show-of-force to full combat operations against a hostile force."

More meanings and answers are to be found in some well-thought-out articles in journals and magazines, others in books or lectures. But we will really learn more only after we have headed off the first crisis using a light infantry force. For now, the U.S. Army must take the concept of building a force that can reasonably respond anywhere in the world within a few days as a most innovative idea for using infantry. And to make the most of that force, we must look penetratingly at what history lessons tell us.

If we take the historical lessons presented here and couple them with the innovative thinking currently being done con-

cerning the light infantry, then we can have a viable force capable of performing its mission. What are those lessons?

Iphicrates teaches us to protect the soldier but to keep him as light in weight as possible. Technology can help us do that. Tomorrow the light infantry soldier's battle fatigues will become more protective, more bullet-resistant but still lightweight. The kevlar helmet is already here and has been battle tested in Grenada, and even more improvements are forthcoming.

Nobunaga teaches us to train light infantry so they can overcome a heavy, mobile force. His lesson is one punctuated with tactics, terrain, and disciplined firepower. Technology can give us some of those same advantages. Lightweight but devastatingly accurate antitank guided weapons are available for arming our infantrymen. Belgian arms manufacturers have developed a family of rifle grenades with armor-piercing, antipersonnel, smoke, and illuminating capabilities. These rounds are available for firing from a variety of infantry rifles, and they eliminate the need for separate grenade launchers, light mortars, and the personnel to use these weapons.

Frederick the Great instructs us to sustain the soldier but also to ensure that he can sustain himself. Technology can do that, too. The space program has given us compressed, dehydrated or paste concentrate meals, high in nutrition and the calories an infantryman must have. Frederick's regimental and army supply trains (and ours) can come to a halt, but the light infantryman can still sustain himself, supplementing his needs from the land if necessary and, most important, carrying in a pocket enough meals for many days. To protect and shelter him, the modern infantryman's bivouac outfit would be similar to that of backpackers and other outdoorsmen.

General Braddock teaches us that light infantry can cover an advance, protect the front, and find the enemy. Technology can make that lesson apply to the light infantry force. Today's night vision goggles and tomorrow's improved versions of them will allow the light infantry to be an all-weather, day-and-night, combat capable fighting force. And if protected by the terrain and the weather, that force can be even more effective.

General Hutier's tactics teach us that firepower, if correctly applied by a fast-moving infantry force, can be a key to overcoming complex enemy entrenchments. More significantly, the historical effect of the German successes reminds us

that during battle, events have a way of developing in an unexpected way. Fast-moving infantry could get into a situation in which ammunition resupply, or any resupply effort, could be delayed or never come at all.

Technology to the rescue again? Yes, with the introduction of the German G11 assault rifle (or some similar weapon), the problems of ammunition resupply, marksmanship, firepower, and sheer weight might be solved.

The G11 is a small, light, gas-operated assault rifle with three firing modes: single shot, controlled burst (three rounds), and fully automatic fire. The weapon is chambered for the innovative 4.7mm caseless ammunition and has a magazine capacity of 50 rounds. Equip this rifle with the futuristic "razerscope" (a combination radar-laser-infrared sight with a micro-processor that provides accurate aiming and rangefinding even in bad conditions) and the light infantryman has the firepower and accuracy that the German *jaegers* and storm troopers tried to achieve. And the G11 rifle's caseless ammunition allows a soldier to carry three times the basic load he now carries. Going into battle with a modernized combat load has an important bearing on the energy tomorrow's infantryman may be called upon to expend.

Finally, General McNair gives us a hard look at tactics, equipment, research, and doctrine for advancing the concept of the light infantry force. The discussion of whether light infantry, as a viable force, is right or wrong is moot. History is on its side.

We must glean from history the lessons that can give energy and direction to the light infantry force, because both energy and direction will be needed to carry out the dictates of our national policies. We must all see to the nurture of this force, because the time for deploying it could come sooner than we expect.



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