was created after the pattern of successful guerrilla units of the Viet Minh and raised to an exceptionally high degree of sophistication. The Sapper Corps originated in 1946 when the Viet Minh imaginatively employed professional thieves with special skills and competencies such as martial arts, swimming, climbing and house-breaking, to penetrate French installations and bases and steal weapons, ammunition, explosives, documents, or carry out assassinations or sabotage.

In 1965 the General Headquarters for the South (COSVN) gave special impetus to the development of Sapper forces with the following objectives in mind:

- To destroy and erode the strength of RVNAF and allied forces.
- To demolish war materiel and strategic and tactical objectives.
- To penetrate and destroy command facilities, outposts, billets, service bases, supply bases, signal centers, radar stations, and military schools.
- To penetrate and strike air bases, airfields, seaports, river boats, military vessels, docks, fire bases, and mechanized bases.
- To penetrate and sabotage defense firms and factories of military value.
- To investigate and conduct battlefield preparation for the infantry, and to secure footholds to pave the way for infantry advance.
- To strike key areas and to act in concert with the infantry in both defense and offense during military campaigns or series of actions.
- To organize against mop-up operation and to mount ambushes and counterambushes.

From 1969 onward, realizing that the commitment of major units to confront the U.S. Army and ARVN was a costly failure, COSVN converted several infantry battalions to sapper battalions and gave sapper training to all infantry units.

There were two kinds of sappers: surface sappers and underwater sappers, and two forms of underwater sapper activities, mining and frogmen's attacks. In the first nine months of 1970, 189 underwater sapper actions were executed. Of the 138 minings in this total, 52 (or 38 percent)

were successful. Of the 51 attacks by frogmen, 28 (or 55 percent) were successful. The sappers' most outstanding achievements were the destruction of USS Krishna on 7 August 1970, the VNN ship HQ 225 on 30 July 1970 in An Xuyen, the blowing up of three barges carrying 300 tons of ammunition in the Saigon River on 5 March 1972, and the burning of the Nha Be gasoline depot on 2 December 1973.

The sapper threat was realized and given high priority by security units. Small outposts took inexpensive measures for detecting infiltration, which were nevertheless effective, such as raising dogs, geese, and ducks on the outer perimeter of their positions. However, sappers tried to erase their human scent by lying in the night dew for a long time; then they would calmly walk up to the dogs and stroke their heads and pet them. If chased, they would jump into a mud hole to obliterate the scent and lead the dogs astray. But the crudest countermeasure was to eliminate the dogs with food mixed with a tranquilizer or poison. To deal with geese and ducks, they attached a stalk of blackened waterpotato plant to the end of a walking stick and dangled it upwind in front of the birds. Thinking they saw snakes, the birds did not dare make a sound. Another way they distracted the ducks and geese was to rub green onion leaves on the sappers' bodies. The smell frightened the birds because they thought they smelled vipers.

Mines and booby traps were effective though expensive defenses against sappers. A minefield had to have several kinds of mines, alternately laid; some self-activating mines and some command controlled. Minefields were sometimes strewn with barbs cut from barbed wire. This made it more difficult for the sappers to detect the three-pronged triggers of the mines. Tin cans and noise-making obstacles were rigged to warn sentries. A system of searchlights and armor support near the perimeter of a protected installation also made the sapper's task more difficult but these resources were available only for the most important facilities.

The earthen and concrete bunkers and blockhouses that characterized the outpost and garrison defenses were prime targets for sappers who endeavored to breach them during the assault on the installation. A

well placed satchel charge was usually enough to do the job but in order to get close enough to use one, the sappers would have to neutralize the defenders in the bunker with fire or grenades. An effective protection against this sort of assault was a double net of barbed wire in which the meshes were smaller than a grenade. The outer layer protected the entire bunker while the inner one covered the firing ports.

Against underwater sappers, the most common defense for ships consisted of spotlights to illuminate the surface of the water and searchlights to sweep the banks. Another method called for throwing grenades around the ships' hulls, but this was expensive. Among other defenses tried was sinking a high-intensity light in a ball deep below the surface but this proved ineffective since the light did not radiate far enough. Less costly and more effective ways included frequent river patrols on sampans, mine clearing by small craft dragging hooked steel cables, and periodic engine idling to hamper frogmen with the turning propeller,

An effective way to protect bridges was a wire mesh around bridge supports. Wire nets were spread upstream about 100 meters from the bridge on floats to stop drifting mines, frogmen, and especially water hyacinths which were frequently used by sappers for concealment. Troops would fire at approaching hyacinths as a precautionary measure.

Communist sappers who had rallied were employed to stage demonstrations at large bases and major headquarters. At Long Binh Base, one such demonstration showed that sappers could break through the several barbed wire fences in only ten minutes. Demonstrations of bridge mining, of carrying explosives on personnel and on rafts, and methods of remaining under water for extended periods were most effective instruction techniques. In order to reap the most benefit from these demonstrations, in 1973 the JGS General Agency for Military Training sent NCO instructors from Quang Trung Training Center to a sapper course conducted by ex-sappers. These NCOs then toured the military regions holding demonstrations of their own.

Among anti-sapper measures which U.S. forces employed there were some that ARVN could not adopt and had to modify. For example, to combat frogman-sappers at Cam Ranh Base, live electric wire was trailed in the

An Ex-Sapper Demonstrates Infiltrating Through Barbed Wire and a Mine Field at Long Binh, August 1969

water, and dolphins were used as well as U.S. Navy frogmen to detect sappers. These measures were hard for the RVNAF to duplicate for lack of resources. Although the Vietnamese Navy had frogmen, they were few and too ill-equipped for extensive use.

The use of seismic and other mechanical and electronic sensors in the defense of vital bases had to be abandoned after the U.S. withdrawal because the sensors had to be replaced after only a short time in service. When the supply of fresh sensors was exhausted, the RVNAF was not resupplied. In any event, the sensors' effectiveness was rather limited; they were unable to distinguish between people and animals.

U.S. anti-sapper measures were frequently modified by the RVNAF because the resources were not available to adopt the American system in its entirety. The Long Binh Base was a case in point. The U.S. defense had two illumination systems: one to illuminate the inward side of the fence and a system of searchlights to illuminate the outer side. The high grass, being an obstacle to observation, was killed by herbicides. When the Long Binh Base was turned over to ARVN, grass became a problem because the RVNAF had no herbicide or efficient mowing equipment. The far-reaching beacon-lights were no longer available. The base defense forces had to revise the security plan. Lights were now beamed on the inside of the fence only. The wire mesh perimeter fence was replaced by a sheet iron fence painted white because experience had shown that wire mesh fences were more easily cut than sheet iron fences. The white paint aided in detecting breaches in the fence. Because grass became uncontollable, a concrete path was laid around the perimeter. Troops were issued bicycles to replace the motor vehicles of earlier times. The advantage achieved was complete silence without sacrificing much speed.

The defense of U.S.-transferred bases ran into the dual problem of reduced resources and personnel shortages. Bases that had been built for divisions were defended by units no larger than a RF battalion. Penetration into such bases was easy for sappers, but since they no longer housed headquarters and supplies, they lost their attractiveness as targets.

In summary, enemy sapper action was a very effective tactic in the war of attrition and annihilation in terms of material damage and

psychological and propaganda impact. The success of sapper action depended on courage, cleverness and resourcefulness.

Anti-sapper action had to be based on continuous vigilance, elimination of routine patterns, and most important, cleverness and resourcefulness to combat the enemy's cleverness and resourcefulness.

Defense Against Shelling

Shelling was the most frequent Communist tactic. They used it extensively in guerrilla as well as conventional operations. Shelling was appropriate in guerrilla actions because it harassed and exhausted the enemy, and fought more with less.

When in 1968 Communist forces began to be equipped with artillery rockets and several kinds of field artillery, preparation shelling was used before infantry assaults. The tactic of "first shelling, then assault" became routine after that time. For a number of enemy military leaders, artillery was a substitute for the air power which they could not employ in the South. In battles such as that of Quang Tri during the 1972 summer offensive, the enemy's 130-mm artillery was so successful in pounding ARVN outposts in the DMZ that defensive troops were pinned down while enemy infantry was closing in with impunity.

Such large-scale utilization of artillery occurred only in large engagements, but sporadic shelling occurred everywhere. This kind of shelling was often conducted by three-man teams with artillery rockets or a single mortar. The targets were usually small posts, garrisons or villages and were easy to hit with a few rounds. The effect on the people in the target area was often greatly out of proportion to the number of rounds fired or the damage inflicted. It was a matter of personal survival to them, while a 1,000 round concentration of fire on a remote ARVN unit was just something they might read about in the paper. Take the first rocket shelling on 19 March 1968 against Saigon: a total of 22 rockets fell in the center of the city causing 150 houses to burn, three policemen and two civilians were killed and 32 people were wounded. After this incident, shelling became virtually the only topic of conversation among

the population. Materials for the construction of shelters — sandbags and sand — rose sharply in price, then disappeared from the market and the press demanded that government take immediate measures to protect the population from shelling.

A shelling security belt was devised for Saigon and other important cities. This belt was to reach beyond the effective range of rockets, from 8 to 10 kilometers. (Though subsequently Communist troops used booster charges to reach a range of 18 kilometers. With this extended capability, enemy rockets were able to hit Da Nang air base from the foot of the mountains at Hai Van Pass).

Airports, frequent targets of shelling, were usually sited on the outskirts of major cities, about four to five kilometers from the city center. In planning a security belt, the safety zone could not start from the geographical center of the city but from the most outlying targets and often encompassed a radius of about 15 kilometers or more. The area included in this radius was therefore extensive.

Rockets were easy to smuggle in, to conceal, and to fire. They were usually transported to the firing sites days before, concealed underwater in rice paddies or camouflaged. Launching ramps were simple; they could be two logs tied together at one end or small dirt ramps. They were very inaccurate but the objective of the firing was terror rather than military destruction so that did not matter to the enemy.

In cities such as Saigon and Da Nang special task forces were formed to handle defense against shelling. The units involved included ARVN regulars, allied forces, RF, and PF units. The safety zone was divided into areas of responsibility. Units conducted patrols in their assigned areas and set day and night ambushes. Curfews were imposed in the most sensitive areas to avoid confusion and friendly casualties.

The Air Force played an important role in reconnaissance in the security zones and in the detection and attack of firing sites. As soon as night fell, illumination aircraft went aloft to light up suspected routes to firing sites. Helicopters operated in groups of three, one equipped with searchlights and the other two armed to strike suspected targets while artillery provided the main counterbattery fire. Artillery

observers manned observation posts closest to the anti-shelling security belt. They were equipped with radars to detect firings but the effective range of these radars was limited to about three kilometers. Areas uncovered by radar were protected by ambushes and minefields. Each night the Saigon anti-shelling task force set as many as 100 ambushes around the city. Some radars were teamed with sensor fields but this technique lasted only while the U.S. was still providing the sensors.

In 1967, Danang authorities constructed a bamboo fence several kilometers long protected by a series of small guardposts but the enemy found it relatively easy to breach. Furthermore, the peasants in the area found it inconvenient and broke it in many places. The project was eventually scrapped.

For all their deficiencies, the measures worked out and implemented by the task forces were as effective as could be expected. Take, for example, the case of Saigon City. From late May to late June 1968, the enemy shelled Saigon eight times. After the task force began to work, the enemy was unable to launch another shelling until mid-August and only two additional until the end of that year.

Patrols in the security belt proved effective in capturing rockets that had not been used, and in preventing transportation of additional rockets from enemy bases into the security zone. In mid September 1968, an ARVN unit captured a battery of 12 tubes of 107-mm rockets in Can Giuoc, Long An Province, south of Saigon. Effective patrolling also caused the enemy to delay firings. A number of rockets, buried too long, failed to explode on impact. In shelling of Saigon on 31 October 1968, four out of eight rockets fired were duds. All units, however, did not perform their patrol duties with zeal or integrity. There was the time when the enemy firing position was in the ambush site supposedly occupied by friendly troops. An investigation revealed that the RVNAF unit had neglected, out of laziness, to move far enough and had instead set up a kilometer short of its objective. After this, commanders were punished when the enemy succeeded in firing from the commander's sector of responsibility. Cash awards were given to units that captured rockets or caught shelling teams in ambush. Eight rockets were once captured in Tan Uyen

District, Bien Hoa Province. A patrol uncovered the battery of 122-mm rockets timed to go off by a clockwork. Other similar instances of capture occurred, such as where rockets were timed to fire by ingenious mechanical timers. These instances showed that enemy shelling teams were afraid of discovery and counterbattery fire.

Sometimes the enemy took advantage of RVNAF negligent habits to time their shelling. Many shellings occurred between 5:30 and 6:30 in the morning. After some investigation and study, the task force discovered that VNAF patrol aircraft stopped operations and landed before dawn, assuming that the enemy would not risk shelling at daybreak. Such errors of judgment were studied and quickly exploited by the enemy.

Besides the military measures described above, pacification measures contributed to the tactical effort to counter enemy shelling. The pacification effort was intensified in the areas adjoining the rocket belt. Organizations associated with this effort, such as the police, revolutionary development cadres, and self-defense militia, were mobilized to gather information concerning enemy shelling activities. The effectiveness of pacification measures was such that the enemy was forced to plan his shellings as elaborately as any other military operation, employing security forces, rocket transportation units, and other resources. As more units became involved, the operations became easier for RVNAF to discover and prevent. Many attempts were aborted through the combined investigation and intelligence effort of U.S. and Vietnamese forces. Nevertheless it was easier for the enemy to shell than it was for RVNAF to prevent it and counteraction required many resources, much coordination, and great determination. When these were mustered in sufficient degree to minimize the shelling threat, the RVNAF forces involved tended to lose the initiative for other operations, they exhausted resources needed for other high-priority tasks, and became tied to the defense of a limited area.

CHAPTER VI

Special U.S. Combat Techniques

United States forces found that the tactics and techniques that were generally employed during World War II and the Korean War were largely inadequate to cope with the battlefield conditions they found in Vietnam. Furthermore, the Vietnam War presented the American military leadership with opportunities to develop new weapons and devices, and to test concepts of employment of equipment designed after the end of World War II. The wide use of helicopters, for example, spawned numerous new applications of these versatile machines. The more routine of these applications, such as battlefield reconnaissance, command and control, combat assault, logistic support and medical evacuation were gradually adopted by RVNAF as the equipment became available, but other more sophisticated applications remained exclusively in the U.S. arsenal. Examples of these were helicopters specially equipped with night vision and illumination devices and odor detecting *People-sniffer* equipment. The VNAF was equipped with gunships for the support of ground troops but these were the familiar *Huey* helicopters and not the more modern *Cobras* introduced by the U.S. Army later in the war.

With minor exceptions, such as those mentioned, modern American equipment, and the tactics and techniques developed by the U.S. Army and Air Force for the employment of that equipment were gradually transferred to the RVNAF.

Besides the extensive use of helicopters in virtually every possible military application, four other major battlefield techniques were developed to a high degree of expertise by the Americans in

Vietnam. The most prominent of these was the employment of massed B-52 strategic bombers in a tactical role. Heavy bombers had been used in support of ground operations in World War II and Korea but never on the scale they were employed in Vietnam. As used in South Vietnam, these heavy bombers were the most destructive of all weapons and the psychological and political effects of their strikes were great.

Second only to the B-52s in the psychological and political repercussions caused was the use of defoliants to eliminate the enemy's concealment in the jungles of Vietnam and his food crops in remote areas.

Closely related to the use of chemical defoliants, but lacking the political and psychological effects, was the employment of huge crawler tractors—*Rome plows*—to remove vegetation that could hide enemy activities.

Finally, chemical warfare (not involving the use of lethal agents as in World War I but incapacitating types of tear gas) made its appearance on the battlefields of Vietnam and also caused some adverse political reactions.

B-52 Bombers

On 18 June 1965, a news report on the war situation in Vietnam commanded the special attention of war watchers. For the first time B-52 bombers were committed to bomb in War Zone D, forty miles northeast of Saigon. The people of Bien Hoa, the province capital on the southern fringe of War Zone D, were stunned by the violent vibrations and series of explosions and woke up to discover a new word: "B-52." It was rumored that no living thing, large or small, in an area hit by B-52s, could survive.

Vietnamese Army troops first looked upon the B-52 strikes as a curious American phenomenon but later learned to appreciate their tremendous destructive effects. This appreciation grew into a feeling of confidence; if the B-52s were in support, all would be well for the ARVN units.

ARVN commanders, however, even at division and corps level, were told very little by the Americans about the techniques of employment of the B-52s. These commanders were consulted during the target selection process and were notified by MACV which targets had been approved, but they were never told the exact time the target would be struck. This practice obviously reflected the Americans' concern for security, for it was not long after the B-52s came to be employed with frequency that we began to hear that the enemy was claiming that he had advance warning about specific B-52 strikes.

The enemy was faced with a serious morale problem. The nearly silent approach of the horrendous violence carried by the B-52s was creating great anxiety among his troops. Defectors and prisoners of war attested to this frequently. They told of the sudden destruction of an entire battalion and once even of a complete regiment. Tunnels and caves collapsed and buried the soldiers alive. There was no escape from the power of these heavy bombs; even near misses would cause internal hemorrhages.

In July 1967 Hanoi Radio announced the death of General Nguyen Chi Thanh, commander of all Viet Cong forces in the South. A report spread throughout the Communist ranks that General Thanh had been killed in a B-52 raid on the Tay Ninh-Cambodia border. This was probably a true report, but its validity didn't matter; it was enough that the troops believed it. The fear of the B-52 spread throughout the Viet Cong ranks like a wave. The high command had to do something to restore confidence and they elected to try to convince the troops that their leaders had prior warning of all strikes in sufficient time to take adequate cover or to vacate the target area.

Soon after COSVN began this internal propaganda effort, prisoners of war and defectors began telling their interrogators that they were warned of impending strikes. Some Americans put too much credence in these reports and assumed that there must be enemy agents in the ARVN staff structure who were passing the information to COSVN. The trouble with this assumption, however, was that few ARVN personnel were informed in advance of all the specifics concerning strikes.

There is a little doubt, however, that the enemy did develop an early warning system of sorts. How effective it could have been is open to serious question, but by piecing together information collected from their available sources, this system might have given some general warning of a B-52 raid on the way.

The enemy learned from experience that U.S. forces often exploited the effects of B-52 strikes, so one indication of an impending strike was preparations for an operation made by American units. Information of this sort wasn't too difficult to collect, but it was not likely to give much of an indication about when and where a B-52 strike might take place.

A more precise source of information about the timing of a B-52 attack was probably the warning given by Soviet intelligence ships believed to be in the waters around the USAF B-52 bases. This sort of information could have been passed to COSVN as well as to Hanoi by radio in time to inform at least some of the Communist troop commands that a flight of B-52s had taken off and were headed to North or South Vietnam.

More precision about where and when the strike would hit was probably gained by monitoring the U.S. commands' artillery advisory radio net. It was standard practice for a warning of "heavy artillery" to be broadcast on this net just prior to a strike. If, in conjunction with this warning the Viet Cong or NVA unit would notice that all American air activity had ceased in its area——the spotter-planes had left and the helicopters they normally saw and heard were absent—— they might have good reason to expect a B-52 attack. About this time, since it was now very quiet in the jungle hide-out, the soldiers might hear the faint rumble of the high-flying bombers. If a warning had not already been passed to the troops, it was probably too late by now. Nevertheless, warnings of strikes were frequently given to the troops. If the predicted strike failed to materialize no soldier would be likely to complain. If the strike did happen and some lucky evasive action to avoid destruction had been taken by the unit after the warning, the cadre could take the credit, boast of the

great early warning system, and morale would improve.

Although ARVN soldiers came to be very fond of (and possibly too dependent upon) B-52s, the RVNAF leadership and the general population of South Vietnam had some misgivings about B-52s striking close to populated areas. What would happen, many wondered, if by some technical error the bombs fell on a village or if one of the giant bombers itself crashed into a populated area? This concern was natural because the people had seen the effects of errors made by tactical bombers; and the aviators in these planes could see their targets. If they could make such tragic mistakes from such low levels, how could the fliers in the high altitude bombers do any better?

There were a few serious mistakes made by B-52s. The first one was in the That Son region of Chau Doc Province when several bombs impacted in a village. In 1968 a B-52 bomb fell on the edge of a district capital. Generally speaking, however, the B-52 safety record was excellent. It was an accurate system and a safety margin of 3,000 meters on the flank of a target box was usually adequate.

B-52 employment techniques improved over time. Initially, all targets had to be preplanned; no targets of opportunity could be hit. From about mid 1966, however, the USAF developed the capability of switching to alternate targets while in flight. From 1967 on, the great bombers gave close support to infantry units in contact. Missions of this type accounted for about 10 percent of all missions flown.

The B-52 really proved its worth as a close support weapon during the 1972 Communist offensive. An Loc and the ARVN units defending it were saved by the timely and accurate B-52 attacks on the three enemy divisions laying siege to the town. The precision with which the B-52s struck on the northern edge of An Loc undoubtedly saved the 81st Airborne Rangers from being overrun in that sector.

After years of fruitless discussions, North Vietnam's agreement finally to accept the terms of the 1973 cease-fire has been attributed by many as a direct result of the heavy B-52 strikes against North

Vietnam in December 1972. There is little doubt that these devastating air-raids were an important factor in the Communists' decision.

One half hour before the Paris Treaty became effective in South Vietnam—0800 on 28 January 1973—the last B-52 mission was flown against enemy units on the Cua Viet line where the last major battle of the war had taken place between the South Vietnamese Marines and the NVA 325th Division. This strike ended the nine-year involvement of the B-52s in the Vietnam War, and coming as it did in the last minutes before cease-fire, illustrated the fondness for and reliance on the great bombers that had developed over the years among the RVNAF commanders.

Some critics have observed that B-52s, as they were employed in South Vietnam, were a wasteful, wanton exercise in overkill. There is no doubt that it was an expensive weapons system to employ with such frequency against often allusive and indistinct targets. Vo Nguyen Giap, hardly an objective commentator, said that the use of such strategic bombers in a war that had no terrain objectives—a people's war—was a fruitless undertaking.

Putting aside the question of cost—for after all, how can a price-tag be placed on the survival or defeat of a nation—is there any question that the employment of B-52s in support of the ground war in South Vietnam was a successful tactic? I think not. There is little doubt in the minds of senior South Vietnamese military leaders that had B-52s been used during the battle for Phuoc Long in December 1974, the success at An Loc in 1972 would have been repeated. The two NVA divisions that converged on the outnumbered, outgunned little garrison at Song Be-Phuoc Binh would have presented lucrative, massed targets for destruction by B-52s. Had B-52s been used in Phuoc Long, the enemy would not have gone ahead with his plans to attack Ban Me Thuot with three divisions and Darlac would not have fallen. The entire chain of events that led to the defeats and evacuation of Military Regions 1 and 2 would have been averted.

Their pleas for B-52 support in the hour of peril unheeded, South Vietnamese leaders——with the technical assistance of a few Americans brought in for the purpose——had clusters of 32 bombs improvised and dropped on enemy units in Tay Ninh Province, hoping to cause the enemy to believe that the B-52s had returned. They caused violent explosions and fires, but did not save Tay Ninh. Such were the flickering flames of a dying lamp.

Defoliation

Defoliation was introduced into the Vietnam War at the end of 1960. This was the time when Communist military activities in the South had begun to intensify. Each passing day saw more snippings, minings, ambushes, and assaults on outposts. Most of these incidents occurred in areas where dense vegetation provided excellent concealment for the enemy.

Also during this period, the Communist began to reorganize their bases where they grew rice and vegetables for their troops. ARVN operations into enemy zones such as the famed Do Xa Zone in Military Region 2 uncovered vast farms but the ARVN units had no way to destroy the crops. In consultation with U.S. advisors, South Vietnamese military leaders then in 1959 conceived a plan for employing chemical defoliants for this purpose. The U.S. supplied the chemicals and the delivery means.

Until 1965 defoliation was largely unnoticed although the National Liberation Front protested for the first time in 1963. When U.S. forces began participating in combat operations in 1965, defoliation increased by leaps and bounds, partly because of the need to establish new military bases and airfields in densely vegetated areas.

Defoliation became a household word in Vietnamese homes in Saigon and neighboring provinces for the first time in July 1965 when defoliants were used to clear the Long Binh area which was to be the home of U.S. Army, Vietnam, and U.S. II Field Force. Unfortunately, the defoliants sprayed on the brushlands at Long Binh drifted over to the plantations, orchards and farms of Bien Hoa and neighboring Lai Thieu

and took a heavy toll of the rich crops of custard-apple, mango, jackfruit, pineapple and other fruits. The effects appeared overnight. Fruit fell from the trees and the rubber trees in the large nearby plantations turned brown and lost their leaves. The people were stunned by the results but didn't know at the time what had caused such devastation. When they finally learned about the defoliants they became worried lest the chemicals also be dangerous to human and animal life. They remained skeptical of the government's explication even after a member of the government's panel at a press conference tasted the defoliation agent. The farmers, worried about ruined crops and bankruptcy were not much comforted by the official word that the effects would not last for more than a year. The government had to establish boards chaired by the provincial agricultural directors to assess damages and set compensation for the farmers.

From then on defoliation became a source of constant anxiety for the growers. In 1966 and 1967, the births of a number of defective babies in Saigon and Tay Ninh were blamed by many people on the defoliants.

In an experiment in 1961, defoliants were issued to VNAF and tried out on jungles. It was discovered that the agents were as effective against jungles as they were against crops and bushland. Soon afterwards, defoliation was carried out to remove vegetation from the roadsides along lines of communication throughout the country, to uncover infiltration routes from sourthern Laos into the 1st and 2nd Military Regions, as well as to wipe out the enemy's crops. The latter effort was part of the plan to deny the enemy his food supply in conjunction with the Strategic Hamlet program which was then being extensively implemented.

The Vietnamese Air Force was incapable of executing the expanding defoliation program so the USAF took over many of the missions. In 1962 about 5,000 hectares of jungle and 700 hectares of farmland were defoliated but the need for defoliation kept increasing day by day: to uncover enemy infiltration routes, lines of communication, storage areas; to destroy crops in enemy-controlled territory; to increase

security for water and land transportation networks, and to clear land for critical installations of U.S. and allied forces.

To minimize civilian opposition, procedures were laid down in January 1966 whereby province and district chiefs, with the concurrence of their U.S. advisers, were vested with authority to recommend defoliation in their respective jurisdictions. If the target areas were under Communist control, the officials had to promise to inform the people living there of the reason for defoliation and to help them relocate in government controlled areas if they so elected. In government controlled areas, if the need for defoliation arose for the security of lines of communication or of bases, the officials had to pledge compensation for any affected crops. To speed up compensation, any claims amounting to under 100,000 piasters were handled at the provincial level; larger claims had to be referred to Saigon. Funding was included in the budget of the General Agency for Political Warfare under the rubric of the Civil-Military Spirit fund.

Proposals for defoliation, approved by both Vietnamese and U.S. officials at the local level were submitted through RVNAF channels and eventually had to be approved by MACV and the U.S. ambassador. The government of Vietnam approved no defoliation with crop-destructive effects in the IV Corps area, the rice basket of the South. Crop destruction missions would be approved for the I, II, and III Corps areas if the purpose was to deny the enemy and his sympathizers food, forcing them to devote more manpower to farming and less to military activities. Well-intentioned as it might have been, this exclusion of most of the Mekong Delta from crop-destruction missions was illogical and inappropriate. A case in point was the way the exclusion operated in Dinh Tuong Province, Military Region 4, where the enemy's farming and military activities were consistently more extensive than they were in Long An Province, Military Region 3, where the exclusion did not apply. An even more serious effect of this discrimination showed up in the Central Highlands of Military Region 2. Because there were no absolute bars against crop destruction there, local officials ignored the vulnerability of the Montagnard farms to

defoliants used in the jungles. Consequently, many of the farms of these semi-migrant people were destroyed. This exacerbated the general ill-feeling of the Montagnards toward the government and was exploited by the Communists to good effect. The disaffection generated was one of the main reasons behind the Montagnard separatist movement.

The attitude of some of our local officials was not calculated to win the hearts and minds of the people. Some of them would tell their people that if they wanted to be spared the effects of defoliation, they either had to rid themselves of the enemy, or had to leave their homes to settle in government controlled areas. This "take it or leave it" line was not only unfair but counterproductive. How could the people chase the enemy from their areas?

The crop destruction projects were measured in terms of the number of hectares of defoliated land. But the real effects were harder to measure. What were the effects on the people who happened to have to farm in land controlled by the enemy? (They were usually allowed to keep their harvests after paying taxes to the Communists.) Should they have been denied by defoliants the means to survive? Enemy taxation in money, rice, or other crops did not only take place in enemy-controlled territory but also in contested areas and even in areas considered under government control. The Communists collected most of their rice and money in Military Region 4 where no crop destruction was done while the farmers in the other regions, many of whom worked marginal land at best, suffered most from the crop destruction projects.

In the final analysis, the crop interdiction program, although it affected the enemy's food supply to the point of creating shortages in a few units, had only short-lived effects. Units in short supply were resupplied by rear base service troops with rice from Cambodia, the Mekong Delta, or if they were in Military Region 1, from North Vietnam.

Crop destruction by defoliation thus caused popular opposition to the government without any demonstrable advantage; this opposition far eclipsed any real military gain. This fact was eventually recognized

by MACV and the government and from 1971 on, defoliation of crops was prohibited.

Defoliation of jungled areas was a different matter. Several dense areas which had been enemy bases for many years no longer provided him sufficient concealment. One such region was the Rung Sat, the delta of the Saigon River through which all ocean-going vessels had to pass to reach the port of Saigon. Defoliated in 1968, this dense mangrove swamp was turned bare for easy observation. It ceased to be dangerous except for infrequent mining incidents. Seven years after defoliation the forest showed no sign of revival.

In many formerly dense areas that had been hit by defoliants, enemy activity sharply decreased because of the exposure. Ambushes and minings along lines of communication abruptly decreased after dense vegetation had been killed by herbicides. Military bases enjoyed greater security as defensive belts were cleared. Defoliants were spread by helicopter in these belts to reduce contamination of adjacent areas.

Defoliants continued in use even after the 1973 cease-fire; the South Vietnamese defense budget for 1973 included one billion piasters for this purpose but only 300 million were actually disbursed. But the agents were used exclusively for clearing brush and jungle for security around bases and along rights-of-way.

The Rome Plow

Few in Vietnam ever heard the term *Rome Plow*. For the few Vietnamese who were familiar with U.S. military activities, the term initially conjured up the image of some secret device or weapon rather than that of a bulldozer equipped with a special blade manufactured by Rome Caterpillar Company of Rome, Georgia.

In a war where the defense was based on a network of fortifications, terrain clearing was a constant requirement. Chemical defoliants weren't available for the small posts; they did the clearing by hand

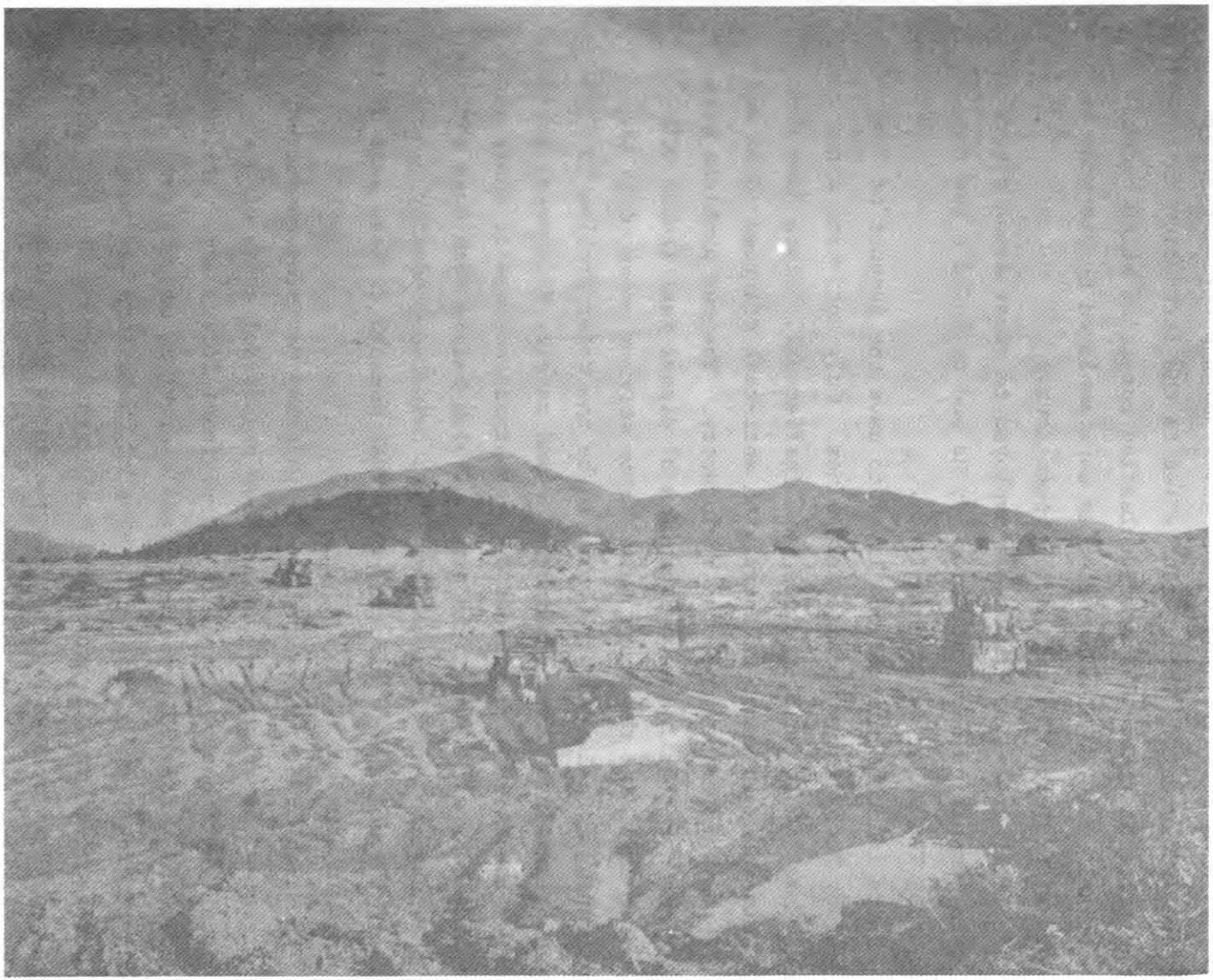
with shovels, hoes and machetes. Occasionally, if they had the excess fuel, they would burn brush with gasoline or fuel oil.

Larger bases could sometimes afford to use mechanized equipment to clear brush from their perimeters. In 1961 the Thu Duc Reserve Officers' Training School, despite its proximity to Saigon, was harassed by small bands of guerrillas who hid in the nearby woods. The best way to eliminate this constant harassment was to remove the woods. The school lacked the resources of its own for such an undertaking but the commandant took advantage of the presence of an engineer company that was building a firing range for the school, borrowed additional civilian bulldozers and cut a road through the woods which was later to be joined by other intersecting roads. This made it possible to run patrols and set ambushes in the woods which diminished enemy guerrilla activities.

In 1966 *Rome Plows* were first tested by American units to clear jungles, to build helicopter landing zones in wooded areas, and to clear sites for military bases. When they were employed in Cu Chi to clear sites for the U.S. 25th Division, *Rome Plows* won the admiration of Vietnamese logistical and engineer units. Trees three feet in diameter were easily sliced through. No trees could fall on the operators who were protected by overhead "headache bars." Old, sturdy bamboo clumps were cleanly cut and uprooted by the blades. Underground rooms and tunnels that had been concealed in dense vegetation were uncovered and destroyed by the bulldozers. Small mines and spiked traps were no obstacles for these mighty machines.

In the first two days of Operation Cedar Falls in the Iron Triangle in 1967, *Rome Plows* cleared three kilometers of 50-meter wide roads. After a month and a half of work, 2,700 hectares were cleared, including 60- to 100-meter wide strips on both sides of the main roads in the Iron Triangle.

Another noteworthy accomplishment of *Rome Plows* was the clearing of National Highway 13 from Lai Khe to Binh Long in the 3rd Military Region. This section had been closed and was not reopened until November 1967, when, during Operation Shenandoah II, *Rome Plows*



Rome Plows Clearing Brush and Leveling Terrain, 1970

cleared 200-meter wide strips of jungle growth from both sides of the highway.

The 1970 Cambodian invasion in the Fishook area showed the efficiency of *Rome Plows* in finding and demolishing enemy underground shelters and tunnels. These results led to the activation in late 1970 of the first of three ARVN ground-clearing companies which became operational in 1971. These companies were employed by platoons in support of divisional pacification operations.

In III Corps, *Rome Plows* were employed to clear dense growth at the main ammunition depot at Thanh Tuy Ha and to build a new road connecting Thanh Tuy Ha to Nhon Trach.

Units in combat operations liked to have the support of *Rome Plows* to destroy booby traps and detonate mines. Only anti-tank mines could damage *Rome Plows*; smaller mines were ineffectual. Since *Rome Plows* were vulnerable to enemy infantry with anti-tank grenades (B-40 and B-41), they had to be protected by infantry. The two problems with *Rome Plows* were their huge consumption of diesel fuel (about 600 gallons a day), and the heavy maintenance service required to keep them running. Fuel resupply proved to be the major problem in fast-moving operations. As for maintenance and repair, Vietnamese ground-clearing companies were plagued by a constant shortage of spare parts. After the U.S. withdrawal, the parts problem became even more serious and the number of serviceable *Rome Plows* dwindled gradually. Nevertheless, through heroic efforts, the RVNAF managed to keep some of the machines in service.

In March 1973, the Vietnamese 3d Infantry Division conducted pacification operations in the Loc Hiep and Go Noi areas of Quang Nam Province, where enemy guerrillas and regional forces were particularly numerous and strong. Supporting these operations was the ground-clearing company of I Corps. The area of operations was covered by thick vegetation and the mines and booby traps were numerous. After three months of operation, *Rome Plows* cleared about 80 square kilometers in the Loc Hiep area, and about 30 square kilometers in the Go Noi area. Underground shelters and tunnels were caved in and filled.

The clearing so changed the face of the land that, according to a captured guerrilla, the enemy was confused and disoriented when he occasionally returned there; familiar landmarks had completely disappeared. This change prompted the 3d Infantry Division to dub the ground-clearing operation "the landmark metamorphosis technique."

When this action was over, however, the clearing company had only seven or eight serviceable bulldozers out of the fifteen available at the beginning. Two or three machines were heavily damaged by anti-tank mines and the remaining were out of commission for lack of spare parts.

We learned that *Rome Plows* were best employed in mass in order to complete the task quickly. This permitted the enemy little opportunity to react and released the security forces quickly for action elsewhere. Also, for long-lasting effect, trees had to be uprooted; when the trunks were only broken they often started growing back again after a while.

Rome Plows did not generate as much opposition as defoliation since their effects were precisely confined and damage to crops and property in the area being cleared was compensated for by the government. Nevertheless, there were demonstrations by people who demanded compensation for property damage in the Phu Cat, Binh Dinh area, where an Air Force base was built. The problem with damage compensation was in fact that the damage compensation schedules were fixed by a law that dated back to French rule and had been changed only once during the First Republic. The failure to bring compensation up to date and to allow for inflation engendered opposition which was unresolvable so long as the legislation remained unchanged.

Another problem was the fact that it was not always easy to determine whether the complaints were legitimate. The difficulty in determining real victims and the payment of compensation to the wrong parties resulted in lawsuits that dragged out for years in Binh Dinh.

Riot Control Agents

Among the weapons employed during the Vietnam War, riot control agents were the only ones that were used on the civilian populace before they were used on the enemy. To control the Buddhist demonstrations in 1963, President Diem's government authorized the use of tear gas grenades for the first time. The people of Saigon became very familiar with these agents.

Riot control agents made their debut in combat operations in 1964 when they were employed by ARVN troops in an attempt to free U.S. prisoners of war held in An Xuyen Province. From then on the tactical employment of riot control agents increased and, after the initial adverse reaction from the foreign press in 1965, the reporters paid less and less attention to it.

In combat operations, tear gas was introduced into underground hideouts and tunnels. Before being supplied this chemical irritant, ARVN troops confronted with underground hideouts during search operations used the old-fashioned technique of smoking-out the occupants. The technique worked fairly well for underground rooms but against tunnels it merely exposed other entrances or vents as the smoke billowed from them.

To counter the smoke, Communist troops maintained a supply of water in their underground shelters. When the smoke entered, they covered their faces with wet towels. Against the chemical agents, lime juice squeezed into wet towels had the effect of reducing tearing. Communist troops were also issued plastic gas masks but they were not very effective. Many prisoners of war said that when hit by tear gas they were nauseated, their heads ached, their eyes and noses started running and their eyes were unable to open for fifteen minutes, during which time they were unable to react to the attack.

Tear gas also proved to be effective in city fighting. In 1968 in the Saigon-Cholon metropolitan area, during which riot control agents were used against the enemy, he suffered a distinct disadvantage

because he had no gas masks. He had to give up positions he had meant to hold when confronted with the advance of masked ARVN troops.

Dense concentrations of tear gas were used to deny the use of base areas and routes for a long period of time. The technique employed 55-gallon drums dropped from aircraft and fuzed to burst on contact or close to the ground. This technique was also used to make it difficult for enemy anti-aircraft gunners to fire at low-flying, defoliant-spraying aircraft.

There is no doubt that the sophisticated weapons systems and the new methods of employing the more ordinary weapons and equipment introduced into the Vietnam War by the Americans gave the American forces and the RVNAF some needed advantages over the enemy. While the U.S. was still in the war, these new techniques could be used to great effect by the RVNAF. When the U.S. forces left the scene and American military assistance funds diminished drastically, the advantages RVNAF enjoyed by virtue of its sharing in these American combat techniques disappeared and even turned into disadvantages.

The RVNAF had hundreds of helicopters and sophisticated airplanes but the supplies of spare parts and the fuel to operate them dried up.

The B-52s were no longer there to rescue beleaguered units, and these units had come to rely too heavily on this support.

The government budget could not support a large defoliation program even if one were deemed necessary, and the *Rome Plows* were idled waiting for parts RVNAF could not afford.

In short, the RVNAF had to return to simpler, less costly methods for fighting the war, and success in fighting a defensive war for survival against an aggressive, dedicated enemy requires decisive strategic or tactical advantages. The RVNAF no longer enjoyed the advantages provided by American combat power, and could not afford to provide them for themselves.

CHAPTER VII

Strategies and Tactics of North Vietnam

The military strategy of North Vietnam was part and parcel of her political strategy: no matter how high and widespread the level of violence, the war was only an extension of politics. Though at times the military solution seemed to be pursued at the expense of the political, this predominance was only temporary; the military strategy formed an integral part of the overall political plan.

Since the general strategy of North Vietnam was based on Marxism-Leninism, her military policy had the same basis, and was further influenced by the theory of people's war and experience gained in the successful drive for political power on the mainland by the Chinese Communists.

North Vietnam's strategy was built on the following key points:

(1) Rely principally on the people's strength to build mass political power. Since the people live everywhere, a successful program to win their hearts and minds and to train them and guide them in the forms of the struggle will surely generate tremendous strength in all localities. For this reason, the North acted on the proposition that armed propaganda surpassed military action in importance.

(2) Recognize the importance of rural areas. To build solid bases and rear areas is essential to success. In the Communist conception the rural areas included jungles and mountains. These areas were important because the rugged terrain and the cover they afforded tended to diminish the superior technology of the United States. Furthermore, these areas were inhabited by ethnic minorities whose allegiance, if won to the Communist side, would be detrimental to the GVN.

In this strategy, the Communists were abbetted by the government authorities who often proved to be inept and corrupt. Jungled and mountainous areas were stepping stones in the conquest of the lowlands. Lowlands owed their importance to the fact that they were the locus of human, natural and material resources which both sides struggled to control. Consequently, the countryside became the vital strategic area. Control of rural areas paved the way for establishing bases and facilities in the urban areas. Urban areas were the nerve centers of the Republic of Vietnam, of its political, military, economic and cultural life, where government had the strength it lacked in the rural areas. It was therefore necessary to enter the urban areas, to seize every opportunity to strike the enemy in his own territory, in every way possible, transforming the rear into the frontline and creating a psychology of insecurity in the Republic.

(3) Always maintain the offensive in order to insure strong protection to base and rear areas, to enlarge them, and to carry the war to the enemy's rear. The rear is the key resource that supports the frontline.

These were the three strategic canons of North Vietnam. They were the basic principles of the military policy which was referred to as the *Military Art*.

The Military Art

The key concept of the people's strength conferred a characteristic feature to the war as fought by the North, which was both a people's war and a total war; that is, the entire population participated in the war. The people were involved in all spheres; not only on the military front but on the economic, diplomatic, cultural and social fronts as well. Because war does not consist of purely military activities, the first principle of the military art is to combine armed struggle with political struggle; armed uprising with revolutionary warfare.

Here the North was clearly following Lenin's thesis that uprising and armed struggle are inseparable and indistinguishable in a people's war. It is no wonder then that even after the failure of the 1968 *Tet* Offensive, in which the expected "general uprising" of the people failed to materialize, North Vietnam continued to try to combine these two forms of struggle in their 1972 Summer Offensive and the 1975 Spring Offensive.

The second tenet of the military art is the application of the principle of strategic leadership and the importance of the rural areas. This tenet called for establishing a resolutely firm posture in rural areas from which to launch assaults on the Republic and the U.S. in three geographical domains: the mountains, the lowlands, and the cities, using tactics appropriate to each. This offensive scheme forces the adversary to spread himself thin, to become vulnerable to siege and attacks on all fronts, and prevents him from massing his strength.

The third tenet of the military art is the application of the principle offensive leadership. Communists consider revolution an offensive. Uprising is a form of offensive. Consequently, revolutionary warfare in the general sense is an offensive. The offensive has to take place in every locale. Even though at particular times and places the Communists were on the tactical defensive, these were construed as temporary, partial events; local defensives were assumed to create conditions and opportunities for fresh offensive. The defensive stance usually occurred in the initial stages of the war when Communists main forces needed protection and the guerrilla and regional forces carried the responsibilities for the military activities, attacking and harassing enemy areas to maintain the initiative.

The fourth tenet of the military art is aiming at greater and quicker victories while gearing up to a long struggle. The time factor in the long struggle is used to weaken and limit the enemy's power, allowing the Communists the opportunity to surmount their own problems with the conviction that the longer the struggle goes on, the weaker the enemy and the stronger the Communists will become. Thus a people's war is almost by definition a protracted war.

Attacks aimed at annihilating the enemy do not only mean destruction of his military power but of his political machinery as well. Just as the fundamental problem of war is the destruction of the enemy's military power, the fundamental goal of any revolution is the seizure of the government. Hence, the dismantling of the local government, the wresting of sovereign power and of the power to govern, are just as important as the annihilation of enemy military units. Such is the fifth tenet of the military art.

The sixth tenet, also not combined to purely military considerations, is concerned with securing international support, especially that of brotherly socialist nations, but all the while putting paramount importance of self-reliance. This tenet originated from the strategic concept of reliance on "the great rear", which is the Communist bloc, and on its support, even though this reliance was never a total one. Derived from this tenet was the idea that socialist esprit and solidarity occupy vital positions in war.

These six tenets of the military art were manifestly apparent in the strategy of North Vietnam. The ideas recurred even during discussions of military tactics, because to the North there was a close connection between strategy, campaigns, and tactics. A correct military strategy had to be able to engender conditions favorable to the successful realizations of campaigns and tactics. The military art must therefore create certain basic structures. These structures are:

(1) In a people's war, forces are stratified into three divisions: main forces, regular forces, and guerrillas. Coordination and employment of these forces constitutes an art that combines guerrilla warfare and conventional warfare in types of actions ranging from skirmishes through medium battles to large battles.

(2) Forces must constantly be on the offensive and the offensive uses all available forces, all available weapons in all forms and intensities at any place at any time.

(3) Ability must be developed to use a small force to fight a larger force. Small force must be so organized as to tackle the larger enemy from a position of strength and annihilate him.

(4) There must be a resolve to destroy. Destruction is more important than attrition. Not only the enemy's troops but also his war materiel and rear areas must be destroyed.

(5) In fighting the enemy, flexibility, determination, creativeness, and surprise must be achieved.

Of utmost importance is the employment of guerrilla warfare as part of military strategy as well as a strategic mission in the war. The transformation of guerrilla warfare to position warfare at the appropriate place and time must be planned for. No less important are accurate assessments of the situation, determination of the direction of attack, selection of methods of fighting, and the correct employment of forces. In addition, there must be developed an ability to evaluate accurately the overall balance of power between the two sides in terms of military as well as political strength, of quality as well as quantity, of strengths as well as weaknesses.

These five points are considered in strategic thinking, in the military art as well as in basic tactics. Beyond this, however, tactics have their own place. Generally speaking, the fundamentals of tactics are similar in all military forces, but their application does vary with the strategic conception of forms of warfare and the conduct of war.

Common Communist Tactics

In the initial stage, that is from 1960 to 1965, a common Communist tactic that inflicted significant losses on ARVN was the ambush. The ambush was a tactical maneuver carried out in accordance with the slogan "fight a small action to achieve great victory." There were six kinds of ambushes; ambush of small units, ambush of patrols, ambush of vehicular convoys, ambush of river crossings, ambush from underground positions, and ambush of mopping-up units.

One of the contributing reasons for Communist success in ambushes was first of all the habits of ambushed units. Often they were on road-clearing missions whose itineraries, times of departure and withdrawal, and forces involved rarely changed. The Communist took advantage of the boredom of the troops on these routine daily missions. So imbued

were the ARVN practices in some areas that the enemy could use the same ambush sites repeatedly.

Ambush went hand in hand with attacks on outposts in a combination referred to as "assail the forts and strike the rescuers," according to which the "fort-assail" part more often than not yielded precedence to the "strike-the-rescuers" part.

Attacking outposts was one of the common activities of the Communists. Since outposts symbolized national authority, demolishing them would achieve both political and military advantages. No matter how strong a fort might be, it had the inevitable weaknesses of the fixed position, the defensive stance, the unchanged personnel strength, and limited firepower. The most widely employed technique against outposts was known as "one point, two faces," whereby a primary thrust was accompanied by two secondary ones.

Another tactic used against outposts was first shelling then assaulting. This came into increasing use after 1968 when Communist troops were better equipped with rockets and field artillery.

To wear down and delay the advance of the enemy, mines and booby traps were frequently employed. In fact, mines and booby traps caused the most ARVN losses in vehicles and personnel.

From 1969 on, sapper tactics received intense emphasis. The Communists, who pushed sapper employment to great lengths by regular sapper units and infantry units as well, used units from squad to regimental size. Sapper techniques received colorful names like "blooming amidst the enemy," or exotic ones like "deep in the heart," and were effective in raids and demolition actions against POL depots and other critical installations.

During the 1972 Summer Offensive, the Communist improved on their technique for blocking roads such as National Route 13 north of Chon Thanh. They dug deep, heavily fortified emplacements with communications tunnels and overhead cover that could withstand the heaviest bombs and artillery. They occupied these positions with only a squad of soldiers who were under orders to fight there for three days or until they were all killed. At the end of three days, the surviving members of the squad were replaced with a fresh squad from the company that occupied a

covered, supporting position a few hundred meters to the rear in the dense jungle. Behind the company was the battalion, also dug in and prepared to prevent any attempt to bypass the road-block. This technique was extremely effective as well as economical in the use of troops.

Another technique for the defense of a critical position was developed to a high degree of effectiveness during the 1972 offensive. This was the siting of three mutually supporting fighting positions in such a way that their fields of fire interlocked to prevent any one position from being successfully assaulted. Of course, these positions could be defeated by determined, well-supported infantry assaults, but the costs were inevitably high.

Communist tactics were applied either in combination or in isolation. Tactics used singly were mostly sapper tactics because of the secrecy and isolation required.

Besides the common tactics, the Communists devised specific techniques to counter new techniques employed by U.S. and RVNAF forces. One family of techniques were those employed against helicopters. Helicopters at first caused tremendous trouble to Communist units with their speed and surprise. The Communists countered with poles planted at likely landing zones. Of course, this was only tokenism since it was impossible to plant poles in all likely landing zones. Communist units had to break up into small bands for concealment and mutual rescue, and had to have their mortars and artillery pre-adjusted on likely landing zones.

Helicopter vulnerabilities gradually became known: they were easy to shoot down, even with small arms, if they were hit in the engine. The fronts of helicopters thus became targets. A bullet was likely to hit either the engine or the pilot. Other weapons such as mines and anti-tank grenades were also employed against helicopters.

Defenses also had to be devised to deal with ARVN and U.S. armor. In the plains of the Third and Fourth Military Regions, and in the border areas between Cambodia and Vietnam, Communist troops were equipped with 57-mm and 75-mm recoilless rifles with which they could destroy armored personnel carriers at considerable ranges while B-40 and B-41 anti-tank grenades would destroy them at shorter ranges.

The Communists also wanted to capture ARVN armored vehicles for their own use. During their attack on Saigon in 1968, they directed a major effort towards the Armor Command at Go Vap to capture armored equipment to support the offensive. They tried again in 1972 when, north of Binh Dinh, they managed to capture six or seven M-113 armored personnel carriers.

The Communists also captured ARVN weapons and uniforms to disguise themselves as ARVN troops. In 1972 many successful attempts at disguise occurred, mostly in the Second Military Region, whose commanding general eventually ordered all troops in his command to wear steel helmets at all times. The measure succeeded because the Communist troops had taken no steel helmets.

In the long run, however, it was not the distinctive and ingenious Communist set of tactics that brought them the ultimate victory. Rather, it was the coherent, long-term, immutable devotion to a strategy that assumed, without question, that victory would come eventually to their side. Total war, people's war; it was one and the same. Their adversaries could not match this concept with any theory of war that they were prepared or willing to follow.

CHAPTER VIII

Observations and Conclusions

The military leaders of North Vietnam were strongly influenced by writings on the theory and art of warfare. One of the maxims they were fond of citing was this:

- When the tactics are wrong and the strategy is wrong, the war will be quickly lost;
- When the tactics are right but the strategy is wrong, battles may be won, but the war will be lost;
- When the tactics are wrong but the strategy is right, battles may be lost, but the war will be won;
- When both the tactics and strategy are right, the war will be won quickly.

During more than twenty years of war between the North and South, each side appeared to have the advantage from time to time. The South faced critical periods and tactical setbacks in 1964, 1968 and 1972 but each time its armed forces rebounded from the brink of defeat and caused the enemy to pull back and regroup. The Communist side suffered serious reverses in 1959, 1967, 1969, 1970 and 1971 but was able to recover to pursue its goal of conquest.

If one were to try to fit the maxim on tactics and strategy to the long conflict in Vietnam, one would probably agree that neither side had wrong tactics *and* wrong strategy, for if either side had been in this condition, the war would have been short.

What about the second case — right tactics and wrong strategy? If the theory is valid, perhaps one could conclude that South Vietnam's tactics were right at least some of the time since the South did win

many battles. But the South lost the war; evidence that its strategy was faulty.

The third case is "wrong tactics; right strategy; victory at last." This might well apply to the North. No one could successfully demonstrate that all of the North's tactics were wrong, in fact many of them were very effective, but they did lose enough battles to suggest that their forces were on many occasions inferior to those of the South. But the maxim also suggests that the North's strategy was essentially correct. Success is the best proof of that conclusion.

A brief discussion of the opposing strategies and tactics will illustrate or refute the validity of the maxim as it has been applied to the Vietnam War. As far as tactics go, both sides knew how to improve and modify their own tactics to bring out their own particular strengths to the utmost and adjust to changing battlefield conditions. Deeply influenced by U.S. tactics and supplied with U.S. equipment, the RVNAF relied on the superiority of firepower, high mobility and abundant resources as the foundation of their tactics.

The Communist on the other hand, took advantage of their familiarity with the terrain, concealment and cover afforded by the terrain and the populace, attrition techniques, and the offensive advantages of mass and surprise. The prime Communist tactic, surpassing even sapper techniques, was the ambush. Eventually, however, ambush tactics were defeated by the counterambush measures which employed sophisticated techniques and hardware, coordination, and quick reaction by air, mechanized forces and artillery.

From a purely military point of view, South Vietnamese leaders improved their tactics and adapted them well to the operational requirements of the war. In contrast to the enemy, however, they failed to coordinate their tactics with their political goals. South Vietnamese units in combat usually were concerned only with military matters: the mission, means, enemy, and terrain. The mission nearly always referred to purely military objectives; little thought was given to the political results or side-effects of any operation. This insensitivity to political considerations at times resulted in actions condoned during combat operations which had

adverse political effects, such as activities that resulted in the unnecessary loss of civilian lives or damage to their property. This was in stark contrast to Communist practice. Before embarking on an offensive, Communist cadres and troops studied and discussed the political aspects of the military operation and the tactics employed were designed with this in mind.

Nevertheless, throughout the war RVNAF and U.S. tactics enjoyed some remarkable successes and forced the enemy to make adjustments, devise countermeasures, and delayed his timetable for victory. For example, RVNAF and U.S. raids on the enemy's supply and infiltration routes compelled him to devote considerable combat resources to food production, route security, protection and reconnaissance for night movements, and alternate route construction. Likewise, with their helicopter mobility and heavy firepower, including the B-52s, the RVNAF and Americans conducted many successful attacks on the enemy's previously secure base areas, compelling him to defend in these rear areas, and to use men and other resources to repair damage, replace losses, and relocate facilities. Remarkable U.S. advances in communications intelligence means, some of which were also effectively employed by the RVNAF, forced the enemy to adopt communications systems much less efficient than radio and to keep his command posts moving lest they be accurately targetted for destruction.

The modern tactics and techniques introduced into Vietnam by the U.S. also had some significant effects on the way RVNAF soldiers and their units functioned in combat. The use of helicopters in the infantry assault spelled the end of the parachute assault which had been developed to a high degree of professionalism by the ARVN airborne units. But another more serious loss in overall combat efficiency and flexibility was directly caused by the reliance infantry units learned to place on externally provided heavy fire support. They became accustomed to the strikes of fighter-bombers, gunships, B-52s, and divisional artillery that would pound the objective before the assault. They forgot how to take an objective by stealth. They forgot how to use their own mortars, machine guns and recoilless rifles in close and continuous support of assaulting infantry.

They forgot how to maneuver for advantageous terrain in order to breach the weakest points of the enemy position.

After years of reliance on helicopters and trucks to move infantry to battle, units neglected the art of marching and with this neglect the troops became lazy; they were tough soldiers but they didn't really know the extent of their physical capabilities because they were so rarely tested.

The ARVN units fell into some other bad habits too. As field radios proliferated, few units bothered to use messengers or wire communications. Field encoding systems were either too much trouble to use — if they were relatively secure — or were too easily broken if they were easy to use. Consequently, great amounts of valuable, sensitive operational information was carelessly transmitted for the enemy to intercept. And he became quite good at it.

Eventually, after 1972, there was an end to the bountiful resources the RVNAF commanders could call upon. Not only were they suddenly deprived of the heavy American fire support that was critical to the survival of the nation's armed forces in the enemy's recent (1972) great offensive, but restrictions began to be placed on RVNAF's own mobility and firepower because of the decline in the American military assistance program. RVNAF commanders were not prepared to cope with this new austere environment. Why? Was it because the Republic still lacked a coherent, long-term strategy for winning? This appears to be the case.

Sun Tzu, the Chinese military philosopher wrote in his treatise on war: "The critical objective in war is to defeat the enemy's strategy."

The North's strategy was never a secret to the South. It was publicly discussed in the North Vietnamese press, appeared in articles and speeches by North Vietnamese leaders, and had been applied with success in the war between 1945 and 1954. There was no secret at all about its main elements: a long-term political struggle broadly based on the strength of the people, striking the enemy on all fronts. But it is one thing to know and another to find an antidote.

As one reviews and analyzes the South's search for a strategy to defeat the North's strategy, one is struck with the fact that the search

was inhibited, perhaps fatally, by the factor of time. Time, the importance attached to quick solutions, and the limited time successive regimes — American as well as South Vietnamese — had available to find these solutions, pervaded all aspects of strategic thinking and planning.

A successful strategy must have continuity in time. This was never a problem in North Vietnam. Its leadership, military and civilian, was in office to stay until the strategy was pursued to its conclusive victory, much as America's and Great Britain's leadership remained in office all during World War II. This was not the case in South Vietnam. Its constitution required a presidential election every four years — as did America's — but its president was limited to only two successive terms (as America's was not in its great war). Furthermore, the institutions of republican government were not only undeveloped in South Vietnam when the war started, but were constantly under enemy attack. Governmental stability was denied the Republic of Vietnam, and governmental stability is a *sine qua non* for a coherent national strategy.

This perennial instability had another deleterious effect: it impelled the political leadership to develop personal followings and loyalties among the armed forces leadership, giving rise to factionalism, division of effort, *coup* plotting and rumors of the same, all of which contributed to wasteful and sometimes corrupt practices in the employment of military resources. Furthermore, military leaders often rose to positions of great responsibility because of political loyalty rather than because of military qualifications. Some of these leaders were militarily inept.

Another thing happened to South Vietnam's strategy: it became inseparable from the strategies the United States devised for the war. And the U.S. strategies were flawed by the same defect as the South Vietnamese: lack of continuity. Furthermore, U.S. policy prohibited a strategy shaped to achieve a real victory over the North. Some critics called it a "no win" strategy, but whatever it was, the U.S. strategy did not provide for a decisive defeat of the enemy.

South Vietnam's strategy did not begin that way. It started as an original, independent concept, quite removed from American influence. Until about 1963, South Vietnam's leaders were attempting to build a

strong base of popular support upon which to form an effective military strategy that could defeat the enemy's broadly based, multifaceted campaign. Certainly the Americans influenced the structure of the South's armed forces during this period because the support for the entire effort was appropriated by the U.S. Congress and administered by the U.S. Defense Department. It seems regrettable that as early as 1954 the U.S Military Assistance Advisory Group failed to understand or appreciate the government's strategy; the MAAG opposed the force structure the government thought best suited for the execution of that strategy. With the Americans holding the purse-strings, neither the Vietnamese President nor the RVNAF General Staff could exert any significant influence on the military force structure or the military strategy from that time on.

The United States imposed a strategic limitaion upon itself, and consequently upon South Vietnam. Its strategic objective was to defeat the Communists in the South but not those in the North. Consistent with this strategic distinction, the United States provided South Vietnam with the means to defend its own territory but not to carry the war to the North. This limitation was, to the Communist theoreticians, a strategic absurdity.

The Americans entered the war with awesome power and advanced technology. It seemed that a happy division of labor could be arrived at. The U.S. forces would drive deep into the enemy zones and destroy his main forces while the RVNAF would confine its efforts to pacifying the populated areas. Despite the logic of this strategic decision, it had some serious faults. In the first place, the spectacular battles the Americans fought so well and with so much firepower and such large formations caught the eyes of all elements of the press. These battles became worldwide news. The tough, grinding, and largely successful pacification campaign the RVNAF were waging went largely unnoticed and unreported. The result was the unavoidable but erroneous impression that the Americans were doing all the fighting for the Vietnamese. This gave the Communistis more propaganda ammunition for their political war: "The Viet Cong were fighting the Americans to save Vietnam." It was a very effective line; it even convinced a lot of Americans.

Just as it appeared that the Americans had taken over the entire burden of the war from the South Vietnamese, so it appeared that the Vietnamese had abdicated all responsibility for strategic planning. Then came *Vietnamization*. All this would change and the Vietnamese would reassume the primary role for the prosecution of their own war. But it did not quite work out that way. *Vietnamization* really meant *Americanization*. The Vietnamese armed forces were deluged with new American war equipment in great quantities, from 175-mm guns and 90-mm gunned tanks to F-5 fighter-bombers. It was not possible to return (or revert) to a Vietnamese-style war. It was going to have to be fought the American way. This meant that firepower was the dominant element of the strategy. That was alright—for as long as the firepower was available and applied in the appropriate places at the right time.

The trouble was that the weight of the combat potential could never be brought to bear. After December 1972, the off-again, on-again American bombing strategy against North Vietnam ended for good and the strategy reverted to a South-only strategy. It shortly also became clear to all participants in the struggle that the crucial elements of the South's firepower advantage—U.S. air and naval power—would not be used. But South Vietnamese leaders were too slow to perceive these permutations in the overall strategy. The U.S. was gone. Left on their own, the Vietnamese leadership had no strategic alternatives available. Perhaps if they had better understood the workings of the American political system they would have been better prepared to deal with the new set of circumstances. But they mistakenly believed that the American President could keep his promises against the will of the American Congress. It was too late when they discovered the folly of this assumption.

Belatedly, President Thieu, in late 1974, began talking about fighting a "poor-man's war." It was too late to ask for this. There was no base of support for it. The political element of the national strategy had been ignored for too long in favor of the massive firepower and technological advantages that made politics almost irrelevant.

Another of Sun Tzu's maxims was "know yourself and know your enemy, and you will win a hundred victories in a hundred battles." The leader-

ship of the Republic of Vietnam knew its enemy, but it knew neither itself nor its ally.

Glossary

ARVN	Army of the Republic of Vietnam
CG	Civil Guard
CORDS	Civil Operations and Revolutionary Development Support
COSVN	Central Office South Vietnam (Communist Headquarters)
DAO	Defense Attache Office
DIOCC	District Intelligence Operations Coordination Committee
GAMO	Groupe Administratif Militaire Operationel
GVN	Government of Vietnam
IOCC	Intelligence Operations Coordination Committee
JGS	Joint General Staff
MAAG	Military Assistance Advisory Group
MACV	Military Assistance Command Vietnam
NVA	North Vietnamese Army
PF	Popular Forces
PIOCC	Provincial Intelligence Operations Coordination Committee
PRU	Provincial Reconnaissance Unit
RF	Regional Forces
RVN	Republic of Vietnam
RVNAF	Republic of Vietnam Armed Forces
SEATO	Southeast Asia Treaty Organization
VC	Viet Cong
VCI	Viet Cong Infrastructure
VNAF	Vietnamese Air Force