Saturday Review of THE SOCIETY

SMART BOMBS AND DUMB STRATEGY

If peace comes to Vietnam, a military analyst argues, it will not be because the North Vietnamese have been bombed into submission, but because Washington has used its furious yet ineffectual attacks to mask a painful settlement.

If the pace of battle in Vietnam has slowed somewhat this past month, the same cannot be said for the tempo of the military press releases emanating from Washington and Saigon. The releases tell glowingly of ever-more-massive B-52 raids and of such technological wonders as the air force's new "smart bombs," TV- and laser beamguided unerringly to their targets. Such sophisticated weaponry, we are asked to believe, makes all the difference between Lyndon Johnson's prodigious yet ineffectual bombing campaign during the years 1965 to 1968 and the present assault on North Vietnam and against the enemy armies operating in the South.

A skeptic might recall that there was no talk of ineffectuality when President Johnson was running the show. Quite to the contrary, back then the bombing took on the grandiloquent code name "Operation Rolling Thunder." Nevertheless, there is no mistaking the new note of glee. According to the Associated Press, reporting from Saigon in a typical story last month, "F-4 fighter-bombers . . . destroyed the Tai Hut and Dong Khai bridges, fifty miles south of the Chinese border. The jets directed five laserguided bombs on the bridges. . . . 'We knocked hell out of them,' an official said. 'Those laser-guided bombs don't

Edmund Stillman is the author of several books, including *Power and Impotence: The Failure of American Foreign Policy.* Formerly adjunct professor at the School of Advanced International Studies of Johns Hopkins University in Baltimore, he now lives and writes in Paris.

BY EDMUND STILLMAN

miss. They just don't miss,' he added."

As an engineering achievement the new weapons, in truth, are impressive. TV-guided bombs, such as the navy's Walleye, home in on their targets from altitudes as great as 30,000 feet, thereby significantly cutting down the risk to the attacking plane. Once the bomb is released, an airman monitors the target through a TV camera mounted in the nose of the falling weapon and controls its fins with radio impulses so as to guide the bomb directly to its target. By contrast, the A-37-a work-horse fighter-bomber of the Vietnam War, armed with four 500-pound bombs, two cylinders of rockets, and a 7.62-mm. machine gun that can "hose down" a hostile area at 7,000 rounds per minute-had to dive 1,500 feet to release its bombs and then descend even lower to target in its rockets. This procedure was much less accurate than the Walleye's, and, not surprisingly, the attrition rate of A-37s has been high.

Laser-guided bombs are even more sophisticated than the Walleye. Two attacking planes work together—one fixes the target with a thin beam of light from afar, while the other launches the bomb. The bomb then directs itself along the laser, impacting, it is claimed, within a "circular error probability" of five feet. An even newer laser system requiring only one attacking plane is on the way.

No, there is nothing comical about U.S. military technology in Vietnam—even if the gee-whiz demeanor of the public relations officers in Washington

and Saigon who boast about it sometimes is. Still, the very prowess of American technology raises uncomfortable questions. Given the introduction of smart bombs, given the blocking of the North Vietnamese harbors and inland waterways with highly sophisticated mines that detect passing ships by variations in pressure, magnetism, and even sound, given the stupendous tonnage of bombs dropped on troop positions and supply lines in the South by tactical jets and B-52s, given the tremendous shellings by the sixtyodd ships of the U.S. Navy maneuvering off the coast-why has not the North Vietnamese spring offensive simply died? Why has not the North Vietnamese army disintegrated in the field? For that matter, why has not North Vietnam itself collapsed?

Some observers have gone so far as to remark that the continuing North Vietnamese resistance is the greatest defeat for American technology since Sputnik. Could it be, others have asked, that the explanation for the endurance of North Vietnam and her military forces is that the Soviets have equipped the North Vietnamese with an arsenal technologically superior even to our own? This latter notion, at least, can pretty well be dismissed. For all of Secretary of Defense Melvin Laird's publicly displayed anger against the Soviet Union for supplying Hanoi with what he called advanced weapons of war, the real truth is that the U.S.S.R. has hardly done so. The NVA fights with simple, if not downright primitive, weaponry. The Soviet leaders, as most of the Third World well knows.

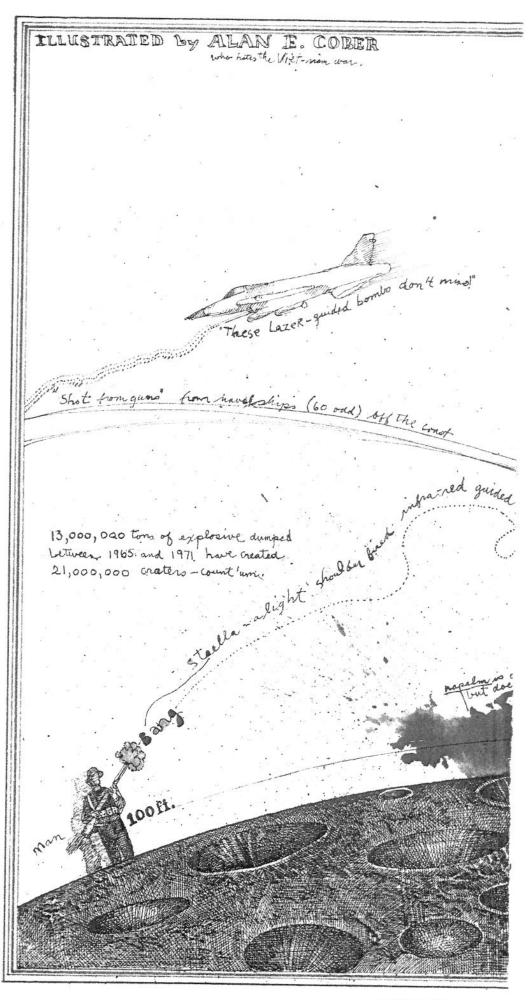
have given more and better equipment to the Egyptians (more than 1,000 T-54/T-55 medium tanks, fifty or so heavies such as the JS-3 and T-10, and superfast Mig-23s and Styx naval missiles that could make life terribly unpleasant for an American fleet operating close to the North Vietnamese coast). Hanoi has been making do without any such assistance. All the Soviets have supplied are light and medium tanks, a limited number of 130-mm., long-range artillery pieces, mortars, machine guns, and the AK-47 automatic rifle, but not much more.

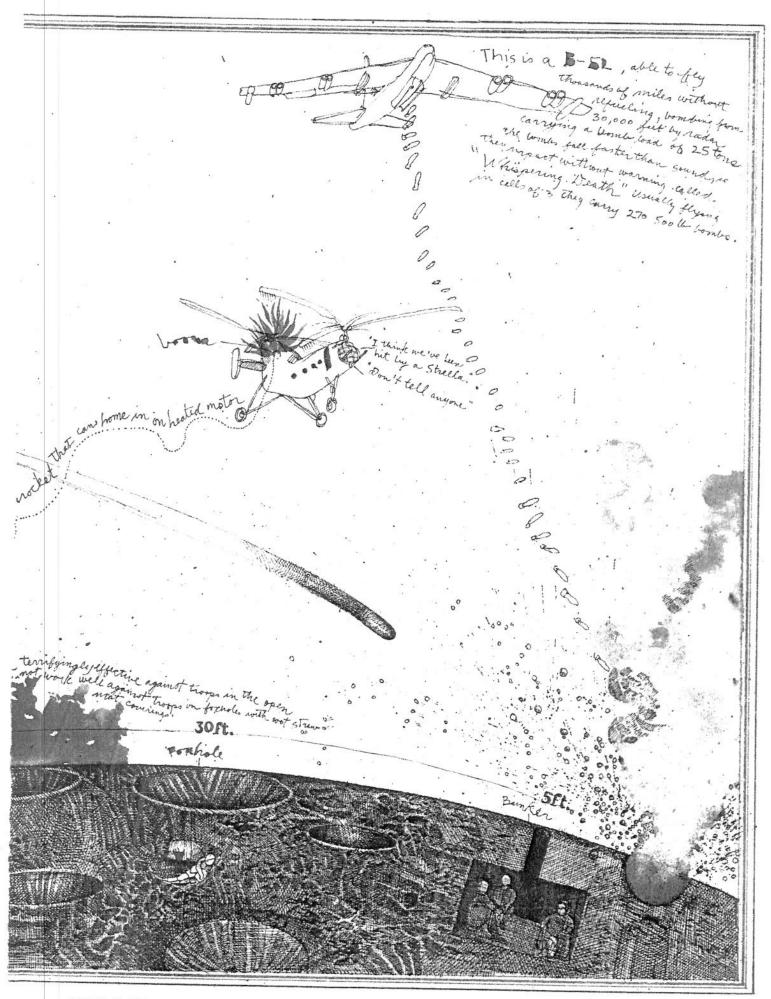
In the Soviet arsenal there is plenty of other weaponry, some of it ten or fifteen years old, that Moscow could introduce into the battle, thereby turning the military situation upside down. A repeated scare is "Strella"—a light, shoulder-fired infrared-guided rocket that can home in on the motor heat of a hovering helicopter gunship and knock it down. Delta Company of the Fourth Air Cavalry reported the loss of a helicopter to Strella on May 2 only fifteen miles south of Hué. Subsequently, the story was confirmed by a high-ranking American officer in Saigon. There have been scattered reports of Strella since. But evidently the weapon, if available to the North Vietnamese at all, is in short supply.

Throughout the war Moscow has no doubt been afraid to anger Washington by introducing advanced weaponrythough of late Moscow's tone has begun to harden, as witness Brezhnev's words in his welcoming speech to Fidel Castro, demanding a change in the Saigon government and promising support for Hanoi "to find victory." The capability for mischief is certainly there—something the escalation artists in Washington might do well to remember. Escalation is a multi-sided game; there is always the theoretical possibility that the enemy, or even thirdparty players, will respond in kind-or more than kind.

Until now, at any rate, the technology used by the enemy in Vietnam to defeat, or mitigate, the advanced military technology employed by the United States has been of the simplest kind. For example, in defensive positions the North Vietnamese resort to the expedients of dispersion and digging. Our napalm may be a terrifyingly effective weapon against a company of troops caught in the open or against a tightly formed convoy of trucks. But against troops spread out over a wide area, dug

Besides being a prominent magazine illustrator, Alan E. Cober, who states after his signature on the work at right "who hates the Vietnam war," is chairman and organizer of the "Artists Against the War" exhibition held at the Society of Illustrators in New York City earlier this month.





into foxholes, and insulated by layers of straw mats doused with water, it is something else. North Vietnamese trucks seldom move in tight convoy thereby presenting an easy target; they move one by one without lights, at night. In the daytime, for all the defoliants, visibility from the air is desperately limited in the thickly forested high plateaus of central Vietnam. Perhaps it is true, as professors Arthur H. Westing and E. W. Pfeiffer have claimed in a recent article in Scientific American, that there are twenty-one million craters in South Vietnam; that a staggering thirteen million tons of explosives were dumped on the country between 1965 and 1971; and that giant bulldozers with eleven-foot blades have subjected 750,000 acres. mostly woodland, to "Rome Plowing" -an allusion to the Roman legionnaire's habit of making a graveyard and calling it a peace. The question remains: How militarily effective has this devastation proved?

Hard as it is to credit, the countryside of Vietnam is not a desert, at least not in the South. The ecosystem is surprisingly hard to destroy; its survival is perhaps the eeriest feature of all. I make no defense of the bombings, north or south of the 17th Parallel, but it was not so long ago, though before the latest upsurge in fighting, that I flew over a large part of South Vietnam by helicopter at an altitude of 1,500 feet or less, and, for all the death and suffering that had gone on below, there was damnably little evidence of ruin in the countryside. (I presume that since the spring offensive began, apart from such leveled cities as Quang Tri, Kontum, or An Loc, the situation has not greatly changed.) And where was the enemy, I asked myself, as I peered down from 1,500 feet at those smiling valleys, wide-stretching rice paddies, and green jungle clumps-where, but where?

Well, some people thought they knew. And so, one afternoon at four o'clock, I saw two South Vietnamese Air Force A-37s peel off and splash napalm all over a hillside. How many tens of thousands of dollars, I wondered, were being expended in the hope of intercepting a little band of black-pajamaed Vietcong who, according to intelligence reports, just might have been sneaking down into the valley to collect a little rice?

Jets? Napalm? All that to intercept five or six coolies creeping under thick jungle cover—if they were there at all that four o'clock of a sunny afternoon somewhere in II Corps area. Why not instead dispatch an ambush patrol to intercept the enemy? Well, it is an old story that American troops do not like to climb hills—this particular clump of jungle lay two or three thou-

sand feet above the plain—and the South Vietnamese army has learned its ways from the Americans. It seems that they, too, prefer ordering napalm strikes to climbing hills. Everyone on our side in Vietnam is spoiled; we are fighting a rich man's war. But, of course, the South Vietnamese army is not rich, and if we and our air power should go. . . .

The jets wheel and dive, oily flame blankets the hillside, parrots scream, monkeys chatter, and five minutes later, I imagine, the little band of Vietcong clamber from their hiding place and slip down into the valley below. They will get their rice.

There has been too much talk of "smart" bombs and hardly any about all those that remain dumb, abysmally dumb.

This war is a parable-the toils and tribulations of America, the blind giant. It is so hard to understand. Flying into the Tan Son Nhut or Bien Hoa or Nha Trang air bases, the eyes bulge at the wealth and power assembled. There are acres of helicopters, Phantom jets, and Dragonships-so sinister in their black night paint, each equipped with four miniguns that can spew out 2,000 or 3,000 rounds per minute. No wonder a succession of civilians such as McGeorge Bundy and Walt Rostow and Mr. Agnew and Mr. Laird, to say nothing of reporters—Americans as well as other foreigners-have not been able to make themselves believe in the futility and waste of it all. To see the American military effort in Vietnam is to see immediately where tens of billions of dollars go-and to stand momentarily reassured in the faith that the United States is still, after all, the mightiest of the mighty.

Alas for the civilian's awe of military power, for most of this might is ineffectual. Ten or twelve miles from Nha Trang air base, one does not stroll in the countryside except on combat patrol. The young soldiers on the mountaintop outpost huddle behind sandbags and concertina wire, besieged by the unknown, while in plain view, so achingly near and yet unutterably far away, the sailboats heel to wind along Nha Trang beach. It is a surreal war.

The trouble is that for all these years there has been too much talk about things like "smart bombs" and hardly any at all about the other 99.8 per cent of the bombs that remain "dumb,"

abysmally dumb. Bombs—short of nuclear bombs, which can be ruled out, one hopes, from any consideration—are not magical weapons. The simple truth, borne home again and again by the experience of combat, is that air power alone, unsupported by disciplined and able ground forces, cannot turn the tide. This remark is carefully formulated. It says something very different from the armchair theorists' airy dismissal of air power—the exaggerated claims for air power by the flyboys having engendered some equally exaggerated rebuttals.

In modern war air power is immensely powerful, and in the appropriate circumstance it can make a crucial difference. But it is not a universal weapon, equally effective everywhere. And too often in recent times it has been wielded blindly (not only by Americans) as a merely vengeful weapon—the unreasoning resort to violence by a baffled combatant who cannot, or dares not, or must not, use his forces on the ground.

This past half century has seen no lack of extremist ideologies of air warfare. There was Douhet, with his doctrine of terror raining from the skiesa doctrine that seized the imaginations of the Luftwaffe and Royal Air Force alike. There was Alexander de Seversky, with his glib promises early in World War II of easy Victory Through Air Power. There was Hermann Goering, uselessly bombing Coventry; there was "Bomber" Harris of the RAF, who rejected the "panaceas" of discriminating bomber attack in favor of murderous city-bombing, such as the hideous (but unnecessary) attack on Dresden. There were our own unreflective air force generals, caught up, willingly or not, in the Vietnam War.

The attraction to the American home front of strategic bombing of the North is obvious: There is the appearance of the war being prosecuted, and not many of our boys die. But, according to the historical record, the actual military effect of mass "strategic" bombing in this century-and even of precision strategic bombing of the enemy's home front-has been ambiguous, to say the least. Between 1941 and 1945, the British Bomber Command visited a veritable hurricane of bombs on Germany's cities, dams, and railroad system. Yet the paradoxical result, as both the British and American strategic bombing surveys concluded after World War II, was that Germany's industrial production for war was significantly higher in 1944 than three years earlier, in spite of all the killing and damage.

A reasonable assumption is that the North Vietnamese case is similar—an assumption that is strengthened by the fact that massive bombing attacks, sustained over more than three years, did not in the days of Lyndon Johnson bring the other side "to its senses," still less to the point of collapse. The Nixon administration may claim greater effectiveness for the present campaign, citing its bombing of new strategic targets, once forbidden, in Hanoi and Haiphong and its mining of the harbors; the air force may crow about its smart bombs and other engineering feats, but essentially it is the same air force and naval air carrying out the bombings, and, more to the point, it is the same North Vietnam.

The great difficulty is that North Vietnam is a singularly unrewarding target. The qualities of courage and discipline shown by its people aside, there is the discouraging fact that north of the 17th Parallel there is simply not that much to burn or to blow up. North Vietnam is not an industrial agglomeration like Hitler's Germany or Tojo's Japan; it is an underdeveloped country, with the most rudimentary production facilities and a capacity to disperse to the open countryside what facilities it does have.

As a result, the United States is up against the classic dilemma of the developed power (I would like to say "civilized" power, but somehow the word will not quite come) fighting against the underdeveloped barbarians -a dilemma as old as that of the Persian Cyrus the Great marching against the Scythians in their trackless steppes, as that of the Roman Emperor Hadrian and later Antoninus Pius harrying the wild Picts and Scots beyond the northern wall and finding only wretched straw huts to burn, as that of the British army in India in the days of the Raj lunging against the Pathans and Afghans of the barren northwest frontier hills. The barbarians, in every case, have little of material value to destroy.

In mid-June, for example, air force spokesmen claimed the destruction of North Vietnam's principal electric power plant-a hydroelectric generator "capable of producing up to 75 per cent" of North Vietnam's requirements. The air force neglected to note that this was the same plant reported on by then Secretary of Defense Robert McNamara to the Senate Armed Services Committee on August 25, 1967. The claim, even then, was that "85 per cent of the country's central electric generating capacity" had been destroyed. However, Mr. McNamara admitted unhappily that the plant in question was smaller than the Pepco plant supplying suburban Alexandria, Virginia, and in any case was made superfluous by the more than 2,000 small diesel-driven generator sets scattered around the country to supply essential needs. Concluded the Secretary of Defense: "The significant industrial

facilities can be counted on your fingers. . . . [North Vietnam has] no real war-making industrial base and hence none which could be destroyed by bombing." Additionally discouraging is the fact that our "enemy" draws his weaponry, not from his own productive capacity, small in any case, but from vast sanctuaries in the Soviet Union and China that cannot be attacked and that the Nixon administration, in spite of all the frenetic diplomatic activity of the past few months and all the repeated hints dropped, has yet to demonstrate convincingly have been wholly cut off, or neutralized, by political means any more than by technical.

None of this is to say the bombings and the mining of the harbors of the North do not hurt the enemy. Hanoi has admitted as much. On June 5, Nhan Dan, the official Communist daily in Hanoi, conceded that "very difficult" economic problems have resulted from the bombing. But the editorial added: "Even if the enemy succeeds in the bomb destruction of our cities and our large industrial installations, they can never paralyze our economy to the point of preventing our survival and

Basic training for the NVA soldier lasts nine months, four of which are devoted to the practice of digging.

our ability to supply the South."

The conclusion may not be sheer braggadocio. North Vietnam shares a long border with China and Laos over almost any point of which supplies may be moved. In addition, the North Vietnamese are building an oil pipeline from China to circumvent the blockade. Moreover, a careful reading of the communiqués reveals that we have claimed the same rail lines leading to China as cut again and again.

The truth, as the Washington intelligence community must know, is that the North Vietnamese prepared far in advance for their current invasion of the South. For three years during the bombing pause stocks were built up. It is estimated that the railroad network was expanded five times. Along every mile of railroad track, one or two hundred yards back, hidden among the brush and trees, lay piles of railroad ties and spare steel rails. Pontoon bridges are hidden under riverbanks, ready to be swung into use when needed. It takes only a matter of hours to repair the effects of most bomb

attacks—by smart bombs or dumb. None of this suggests that North Vietnam will crack under the bombing any time soon, or even that Hanoi's offensive in the South will quickly (literally) run out of gas. What, then, of the effects of tactical bombing—air attacks against the North Vietnamese troops operating in the South?

If the A-37s, F-4s, F-10s, and Cobra gunships can find the enemy—and this is purely a matter of reliable battlefield intelligence and competently trained forward air controllers-they can be devastating. The question is, How good is the intelligence and the forward air control? It is noteworthy that, while the North Vietnamese spring offensive must have been preceded by intense, and detectable, ground activity as the troops moved south and prepared for the assault, the Saigon army's intelligence was caught completely by surprise. Even Secretary Laird proclaimed just a few weeks before the spring offensive that it could not happen. The advanced American detection system-electronic sensors, for example—in the end is still only as good as the ability to process the information gathered, the mental energy to assess it accurately, and the courage to push unwelcome news up the line of command to all-too-often incompetent, slothful, and politically minded generals who are cronies of President Thieu. As for the South Vietnamese forward air controllers, only a few have mastered their art; and, more important, before going into action the U.S. Air Force usually requires the request, or, at the minimum, the confirmation, of an American adviser present on the ground near where the strike is to be directed. Thus, the preponderance of air power available in South Vietnam is not normally at the disposal of the South Vietnamese army acting on its own.

The problems of communications are vastly complicated when the muchtouted "Arclight" raids by B-52s come into play. To begin with, when the B-52s appear over the battlefield, they have already flown hundreds of miles from such bases as Utapao in Thailand. if not thousands of miles from Guam. The request to call them in has proceeded along a complex chain of command: from the South Vietnamese army commander to the American adviser attached to the ARVN unit requesting the strike to U.S. Air Force headquarters in Saigon (where, technically, consultation with ARVN headquarters is necessary for "approval" and "permission"), and only then to the distant air bases themselves. Incredible as it may seem, the usual time between the initial request for B-52 support at the front and the arrival of the giant eight-motor bombers is twelve hours. It can spin out to as

much as twenty—even though the air force claims the bombers are sometimes diverted to new missions once they are in the air. The chances are that against an intelligent enemy—and the North Vietnamese are intelligent—the target has long since disappeared from the field or dug underground.

Taken in the abstract, the power of the B-52s is awesome. Able to fly thousands of miles without refueling, able to bomb with amazing accuracy from a height of 30,000 feet, each plane carrying a bomb load of twenty-five tons, they would seem irresistible. Normally, too, the B-52s operate in "cells" of three-so that the total weight of the 270 bombs dropped into a "target box" measuring 1.8 by 0.6 miles is a horrifying 67.5 tons. The bombs fall faster than sound so that they impact without warning-which, according to Pentagon publicists, accounts for the fact that the North Vietnamese have dubbed the B-52s "Whispering Death." Such a weapon seems utterly unanswerable by the enemy until one looks into the actual effect of the weaponsand it is here that the technology of the shovel comes to the fore.

The air force does not release performance figures about its bombs, but reliable estimates published by British experts hold that a normal 500-pound bomb is lethal within a radius of 100 feet for a man standing in the open, but only with a radius of 30 feet for a man hiding in a decent foxhole. "Flechette" bombs have a greater killing radius against unprotected troops but are virtually useless against structures. The B-52s could not better this performance by carrying bigger bombs. To double the size of each bomb would reduce by half the total number of bombs carried and increase the lethal area of each individual explosion by only 30 per cent. The present bomb size-to-number ratio has been carefully calculated so as to optimize lethal effect within the target box. Yet the enemy on the ground may easily improve his already remarkably good chances of survival with simple expedients. A mere 25 per cent increase in protection, for example, cuts enemy losses by approximately half, so the enemy has ample incentive to dig.

And the North Vietnamese do dig. The average NVA soldier is given nine months of basic training, of which four months are devoted to the theory and practice of digging. It is estimated that without using heavy earth-moving or earth-drilling machinery, the average NVA private can dig twenty feet down in one hour in average soil. This extraordinary burrowing capacity vastly increases the life expectancy of enemy soldiers.

And thus, in the final analysis, the horrendous B-52 raids are an extremely

clumsy method of "zapping Charlie." Some estimates have it that it takes an average of seventy-three tons of bombs to kill one North Vietnamese soldier—more, that is, than the total bomb load of any single three-plane B-52 cell appearing over the battlefield.

If the B-52s can find the enemy in the open (it has happened, but not often) men will die in 28 per cent of the 1.08-square-mile target box. This means that in the ideal case, where the target box exactly coincides with the enemy troop dispositions, so that no bombs fall on unoccupied fields or jungle, the chance of killing an NVA soldier is less than one in three.

But (again assuming an ideal congruence between the enemy dispositions and the box) if the enemy soldiers are crouched in average foxholes, the lethal area is reduced to a meager 2.5 per cent of the box. Here the chances of killing the enemy fall to less than one in forty. And if the enemy is hiding in even rudimentary bunkers—that is, bunkers far weaker than those around An Loc or Kontum—the lethal area may well fall to a trivial 0.6 per cent, and the probability of kill plummets to a near-hopeless 1 in 157.

Thus it is not too difficult to understand the reasons behind an Associated Press dispatch during the fighting in May: "United States B-52 bombers carried out the heaviest concentration of strikes of the war along an eight-mile line to the north of [An Loc]. They dropped more than 1,700 tons of explosives, but when the raids were over, the enemy guns opened fire again."

Although the figures may have varied a little this way or that over the years, tactical bombing has always proved relatively ineffective. On the island of Tarawa during World War II, for example, the U.S. Navy fired and dropped more than 3,500 tons of shells and bombs into an area of nineteen million square feet-that is, only a little more than half a single B-52 target box. This was to drop one ton of explosives for each 5,340 square feet. By contrast, the B-52 cell drops a mere one ton for each 446,054 square feet. In other words, the weight per square foot of bombs and shells unloaded at Tarawa was eightythree times greater than in a standard B-52 target box.

Now read what the navy's "Secret Information Bulletin No. 15, Battle Experiences—Supporting Operations Before and During the Occupation of the Gilbert Islands, Nov. 1943," later made public, has to say:

. . . The naval bombardment prior to the landing on D-day was greater per square unit of ground than had ever previously been given in preparation of a landing operation. On practically every square foot of the island pieces of shell fragments

were later found. . . . Hundreds of the enemy in open trenches were killed. In contrast to this destruction . . . heavily protected dugouts, pillboxes, machine gun emplacements, and bombproof shelters, and the personnel in them, remained almost unaffected by this fire.

Before Tarawa could be taken, 1,115 marines out of approximately 5,000 who took part in the assault lost their lives. Another 2,309 of that number were wounded.

But in spite of all this, the bombing does matter; it has had its effect.

Certainly, it has slowed General Giap down-an army that must dig cannot practice blitzkrieg-and its aid to the morale of the ARVN has been immense. Can anyone doubt that, left to their own devices, the South Vietnamese would long ago have crumbled? The trouble, from the official American point of view, is that without a highgrade army cooperating on the ground, bombing is a weapon of war that injures the enemy's fighting capacity but does not kill it. For if the object of the NVA spring offensive was to test the success or failure of Vietnamization, the proof of its failure is by now overwhelming. The level of American air support has had to be more than tripled; the naval forces operating off the coasts dramatically raised from twelve to sixty-five ships. We are building new air bases in Thailand. Secretary of Defense Laird is now telling us that next year the direct cost of American operations in Vietnam will rise by \$5 billion and the actual figure will surely be higher.

This is hardly ending the American involvement in the war. Yet it is typical of this war that the American planners never seem to assimilate the truth. From the depths of despair, six or eight weeks ago, they have begun to regain their customary euphoria. They have guessed wrong in this war, again and again-not the least in predicting that the spring offensive would begin at Tet, in February, as in 1968, as if Hanoi would pull the same trick twice. Now that the swift deterioration of the military situation has halted, they have begun to confuse holding with winning. But how will they win? Has the other side really no possibility of pulling new surprises? Are the Soviets really incapable of delivering dangerous new weapons?

Surely, the better part of wisdom would be to settle things now, while the situation is, for the precarious moment at least, a little better. That is our best hope—but we should understand if a ceasefire comes, it will not mean that our power smashed the enemy, but our furious and inefficient attacks have made it possible for Washington to accept and disguise a painful settlement in Vietnam.