

All Aboard Air Oblivion

The helicopter Army is its own worst enemy.

by Gregg Easterbrook

Today the United States Army has a bigger air force than the Air Force—second largest in the world, in fact, trailing only the Soviet air force. The Army's air force is composed almost entirely of helicopters, 9,000 of them. (The Air Force has 7,000 aircraft, very few of which are helicopters.) America has more helicopters, and spends more money on helicopters, and is betting more of its security on helicopters, than any other nation.

Yet most of today's helicopter Army would not exist at all were it not for the interservice rivalries and bureaucratic jealousies that infest the Pentagon. Army helicopter development began in earnest after the Air Force was split away from the Army, and new regulations barred the Army from having any airplanes. But the Army needed airplanes. It needed them to

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transport troops and equipment, and for "close support" attacks against enemy tanks during the heat of battle. The new Air Force was supposed to perform these tasks. It didn't. Desperate, the Army turned to helicopters—something it was allowed to have—to move its men and protect them from the air. Thousands upon thousands of helicopter transports and gunships (like the well-known Cobra) were built in lieu of what the Army really wanted and needed, airplanes.

And these thousands of helicopters are, militarily and economically, a disaster area. Helicopters are fine for certain specialized military purposes—medical evacuation, rescue, commando raids, antisubmarine patrols, and terrorizing defenseless peasants (Russian helicopters in Afghanistan have been employed mainly for terror attacks on the helpless). But in the two missions for which most Army helicopters are built, front line transport and "close support,"



the machines are a dangerous fiasco. About as useful, in real-world combat conditions, as the giant Frisbees Army planners toyed with a few years back.

Vietnam (sometimes called the "helicopter war") demonstrated how shockingly vulnerable helicopters were to even light opposition. At the height of Vietnam, the Army was losing one-third of its helicopter force *per year*, informed Pentagon officials say. These losses were not to flak batteries or sophisticated missiles, but "small arms fire," meaning infantry rifles.

Now Vietnam is past, and Army helicopter deployment is oriented mainly towards the prospect of war in Europe—where helicopters would face, not small pockets of riflemen, but massed machine gun, cannon, and rocket fire. "Every last one of them will be blown away in the first 30 minutes" of an intense European battle, says Paul Hoven, a Vietnam helicopter pilot with the Ninth Infantry. A senior Pentagon analyst gives them slightly more time: "Armed helicopters will disappear from the battlefields of Europe by the end of the first week."

Even so, helicopters remain a top Army priority, and they are luxury items when it comes to price. Helicopters, despite their limited range and very small payloads, often cost a great deal more than airplanes. Right now the Army is trying to sell Congress on a multibillion-dollar program for the AH-64A, an antitank helicopter. The new helicopters will cost at least \$15 million each—more than twice the cost of an A-10, the equivalent *jet airplane*.

Why is so much money being spent on a weapon of such limited practical value? One reason is that the helicopter has developed powerful institutional momentum. If the Edsel had been built to military specifications, it probably would be with us today; generals would be photographed with it, contractors would be promising third-generation, rocket-assisted, amphibious Edsels, and congressmen from the contractors' districts would be warning of an Edsel gap. In the case of the helicopter, four of the nation's largest defense contractors (Bell Textron, Boeing, Hughes, and United Technologies) have devoted significant resources to helicopter construction, and agitate constantly for new contracts.

But much more important is the continuing Army-Air Force rivalry. The Army's petty generals like helicopters simply because they are green and fly, and can be used to torment the Air Force during budget battles. Its sincere generals, knowing the Air Force's dismal record of

support for Army troops, feel they would rather take their chances with their own pilots and machines, even if those machines are inferior. Pentagon regulations still prevent the Army from having airplanes which would, in most cases, perform Army missions more cheaply, more effectively, and more reliably than helicopters. Right now the Army has no choice—it *must* build helicopters even though, deep down, it may know better. The situation has to be changed before American soldiers are forced to ride their fragile helicopter corps, Air Oblivion, into another battle.

The Pentagon Capers

As World War II drew to a close, it was clear that airplanes had changed the nature of warfare. It was equally clear that atomic weapons and long-range missiles would change it again. To take these developments into account, the U.S. military establishment was restructured during the late 1940s. The Air Force was split from the Army and made a separate service branch.

With the number of major services increasing from two to three (the Marines are generally grouped with the Navy, since they operate off its ships), and two entirely new types of weapons, atomic bombs and missiles, being thrown up for grabs, the Pentagon's traditional interservice rivalries expanded beyond control, from a closely officiated prizefight to a barroom free-for-all. The services—particularly the Air Force and Navy—swung at each other madly. They brawled in the Pentagon; they slandered each other on Capitol Hill; they raced to leak self-serving technical information to the press. When the Korean War began, many generals and admirals were greatly annoyed, since it distracted them from fighting the *real* enemy.

In the end, the 1950s proved to be an almost unbroken string of bureaucratic victories for the Air Force. After starting life with the old Army Air Corps "tactical" missions and the new atomic bombing mission, it also walked away with most of the big missiles. Nearly every exciting (and expensive) new technical challenge—giant jet bombers, ICBMs, supersonic fighters—went to the Air Force, which replaced the Navy ("join the Navy and see the world") as the country's glamour service. The Navy landed a few expensive plums, like nuclear-powered supercarriers and missile-firing submarines, but not as many as it wanted. The Army, that grimy bunch of grunts and dough-boys slopping through the mud, got nothing.

In fact the Army lost funds and authority on several fronts. It began to shrink. The generals were hopping mad, but what could they do about it? Congress had become a swaying pit of high-tech groupies, shrieking and fainting whenever something bigger than life came onstage. Nuclear bombs! Nuclear ships! Nuclear planes! Rockets to Russia! Bombers from outer space! (The Air Force was actually working on that.) Even though the Army's job—taking and holding land—had traditionally been what wars were all about, nobody cared for anything as dull as *land* any more. Future wars would be fought high in the stratosphere (by the B-52 "Stratofortress"), far below the seas, and deep within the confines of the atom itself. Land—somehow land just wouldn't matter any more. Besides, Congress seemed to say to the Army, what have you got that can knock our eyes out? Do you have a nuclear tank? Do you have a "Stratotank"?

Many of the military's new bureaucratic turf lines were drawn at a series of high-level meetings that began at Key West in 1948. The Air Force, riding a crest of prestige, really stuck it to the Army. It seized authority over all airplanes except the Piper Cub variety—the flyboys would control any "fixed-wing aircraft" heavier than 5,000 pounds.

The Key West agreements, however, placed few restrictions on control of "rotary-winged aircraft," meaning helicopters. Helicopters, then in the early stages of development, did not interest the Air Force. The Air Force dreamed of great, gleaming wonders that could slip the surly bonds of earth and soar vast distances at fantastic speeds. Though impressive to watch, helicopters were pedestrian in function. They couldn't fly much faster than 150 m.p.h. (and still can't), couldn't travel much farther than a few hundred miles, and could carry hardly anything.

For all its other faults, the Air Force understood something essential about the helicopter: it is the most inefficient, improbable way to fly ever devised. "In engineering school they teach us that aerodynamically the helicopter is impossible, said a former helicopter designer. "They're not far wrong."

The key difference between helicopters and airplanes is that the helicopter has no lift. Lift is the unequal air pressure created by wings. With more pressure below the wings than above, there is a force pushing airplanes up. Wings make the airplane rise; engines only have to make it go forward.

For simplicity's sake, it is said that the helicopter's rotor is a "spinning wing." In truth it isn't. The rotor blades are warped, giving them some lift properties, but the effect is slight compared with the total upward force required. Helicopters rise by the action-reaction of driving air down towards the ground, the same way propellers make a boat move forward by driving water towards the rear. Lacking wings, helicopters must compensate with pure power—engines both make the helicopter rise and go forward.

This form of propulsion is highly inefficient because the motor alone must support the helicopter's entire weight at every point during flight. (Airplanes, assisted by wings, can generally fly long periods with their engines at low power or even off.) The mechanics of delivering power to the rotors is also inefficient. The power of a jet airplane's turbine goes straight out the engine's back door, never changing direction. But a helicopter's turbines, which sit to the side of the rotor shaft, spin up and down (and at a perpendicular angle) relative to the "flat" aspect in which the shaft spins. So power must be channeled through transmissions and differentials. Any time power goes "around the corner," much of it is lost to friction and other inefficiencies.

The helicopter's inherent aerodynamic and mechanical drawbacks result in its consuming about three times as much fuel, per weight



carried and distance traveled, as an airplane. For most purposes, aircraft designers say, times-three is a valid rule: anything you can do with an airplane will cost you three times as much to do with a helicopter.

Other complex devices—for instance, gears that enable the blades to change pitch as they describe their circle—make the helicopter, from a mechanical standpoint, more involved than high-performance jet fighters. And it has special problems in military applications. Because weight is at a premium in helicopters, it is impractical to make enough parts out of heavy-duty materials. Many critical components are

Verne Orr, Reagan's Air Force secretary, speaks of cargo planes as if they were a free cocaine program for juvenile delinquents.

highly prone to stress, wear—and bullets. Most airplanes can take several hits from light weapons and continue flying, but helicopters cannot. They are machines that do not really belong in the air, suspended as if by divine grace, anxious for any excuse—a few bullets will do—to go plummeting back whence they came.

Crumbs for the Grunts

So, the Air Force figured, why not give them to the grunts?

At the time of the Key West agreements, the Army wasn't much more interested in helicopters than the Air Force. What good is something you can shoot down with a rifle? So Army brass paid little attention (and supplied scant funds) to General Carl Hutton and his initial experiments with fighting helicopters at Fort Rucker, Alabama. (Hutton would later become one of two men known as the "father of Army aviation.")

At Key West the Air Force promised to fulfill the Army's aerial needs, transport and close-support attacks on tanks. The Army had little choice but to take the Air Force's word. But in fact, notes one retired Air Force colonel, "We accepted those missions solely to keep them away from the Army. We had no intention of sinking our budget into things we didn't like."

As Volney Warner, recently retired Army four-star general, explains, "Budget lines are drawn according to service interests, not joint interests." Transport planes are lumbering, unarmed dummies that do nothing to advance the Air Force's primary mission of striking deep in enemy territory. To fund them the Air Force must take money away from its bombers and fighters, which is like asking the Business Roundtable to underwrite the FTC. So transport planes are always at the bottom of Air Force budget requests. (Similarly, troop ships usually bring up the rear of the Navy's budget.)

The Army should have seen this more clearly. The sort of transport plane it most badly needed was one that could land in proximity of the

battle. That meant a small (harder to hit) plane able to operate off very short fields of grass, dirt, or whatever was handy. Operation from short "unimproved" runways was the requirement that infuriated the Air Force most. It dictated that transport planes be propeller-powered, since prop engines are more durable than jets and generally able to lift aircraft off the ground in the shortest distance. Props! The Air Force build a prop plane? Were Army tanks pulled by mules? Did Navy ships have sails? It was out of the question!

So through the 1950s and early 1960s, little money was invested in transports. What few cargo planes the Air Force did build, the C-130 Hercules and the jet-powered C-141 Starlifter, needed concrete runways. Technically they were able to land on grass, but only in the sense that your car is able to drive on logs—do it twice and you need a new car.) When the Korean War ended, the Air Force mothballed most of its simple C-123 transports, big brothers to the DC-3 and workhorse of Korea. It even began demanding that the Army surrender its small fleet of Caribou light transports, two-engine prop planes capable of operating on very short, bumpy fields and kept only by special exemption to the Key West rules. In 1966, after a decade of pressure, the Army finally gave its Caribous to the Air Force, which promptly put many of them in reserve.

The only transport plane ever to excite Air Force interest was the C5A Galaxy. It met proper standards of grandeur by being complex, expensive, unreliable, and, best of all, the largest airplane in the world. Of course it could not stand the stress of dirt-field landings either (its wings cracked in routine clear-air flight, and a \$1.6 billion wing-replacement project is now in store for the C5A fleet). Size alone barred the C5A from front line operations; it was so big no enemy gunner could possibly miss it. The Air Force message to the Army was clear—we could not care less about your transportation problems.

The Air Force found its second Army "joint mission," close support, even distasteful. Again the type of plane required played an influential role. Close-support airplanes are small (as before, harder to shoot down) with short, stubby wings for maximum maneuverability at low altitudes. Close-support planes spend nearly all their time at low altitudes, since their job is to find and attack small things moving around on the ground. They fly slowly, seldom at more than 380 m.p.h., so the pilot has time to figure out

what's going on down below. It was the slowness of the job that most offended Air Force brass. Why, a close-support plane couldn't fly supersonic *at all*.

Also involved was a running Army-Air Force doctrinal dispute over the nature of warfare. The Air Force believes that "interdiction"—long-range bombing of factories, supply centers, and staging bases ("second echelon targets")—wins modern wars.

The Army, for its part, contends that "first echelon targets"—tanks and troops actively engaged in battle—are the real priority. Beat them, Army theorists maintain, and it doesn't matter what's going on at the ball-bearing warehouse. The Air Force was hardly interested in building close-support aircraft to help prove its own central doctrine wrong. So from the service's creation in 1947 until the early 1970s, it did not field a single close-support aircraft. And when it finally did, it was only because of interservice rivalries with an Army helicopter.

The Sky Cavalry is Coming

Knowing that in combat Army units would be severely handicapped—and many soldiers would needlessly die—because of Air Force indifference, Army generals began casting about for something, anything, to fulfill their needs. In the late 1950s they found a little Italian close-support airplane called the G-91, which carried small bombs and was inferior, in most respects, to American fighters of World War II. They suggested a few G-91s be purchased and assigned to NATO, the most backhanded way imaginable of asking for airplanes. Air Force reaction was thunderous. "Never in my life had I seen so many generals in such a state of juvenile frenzy," said a former high Air Force civilian official. "They kept saying, 'We've got to stop that plane, tell [Congress] any lie you want but stop that plane.'" Again the message was unmistakable: the Air Force (Congress's darling service at the time) would not make the slightest concession about airplanes. The Army would have to reach for the sky some other way. And the only other way was helicopters.

By the late 1950s, helicopters had been perfected to the point that they were reasonably reliable for short, simple flights. General Hutton had successfully fired machine guns and small rockets from them. He dreamed of helicopters replacing both tanks and trucks as whole battalions went "air mobile." He gave his vision the wonderful name "Sky Cavalry." Effusion over helicopters was, at the time, becoming

popular. City councils were rushing to mark out plans for "heliports." Futuristic drawings depicted vertical cities layered by happy commuters chopping along in their personal "helicars."

The Army decided to go into the helicopter business in a big way. General Hamilton Howze, boisterously pro-helicopter, was made head of Army Aviation (he also is called the "father of Army Aviation"—in modern bureaucracies it seems even fatherhood is a joint assignment). More budget money for the Army was on the horizon, since General Maxwell Taylor was winning converts to his "flexible response" doctrine of adding land-fighting power to the president's options. Also gaining ground were the advocates of "counterinsurgency"—preparing the Army to fight guerrillas and revolutionaries on their own terms. The helicopter, able to take off straight up, land straight down, hover, fly very slowly, and operate anywhere, seemed ideal for a new, "flexible," counterinsurgent Army. The things it could do, that an airplane couldn't would, planners believed, prove devastating in combat. By spring 1962 a Sky Cav unit had become a standard component of Army divisions. By fall 1962, the first helicopter division was on its way to Vietnam. Everything was coalescing in the helicopter's favor. Until it was actually used in combat.

Small-Arms Fodder

"I flew in a helicopter every day for six months, and every day I was terrified."

—A Marine captain in Vietnam

"Those things were hell on wheels in our training exercises, but as soon as they flew against live fire, they got chewed to shreds."

—A foreign service officer stationed in Saigon

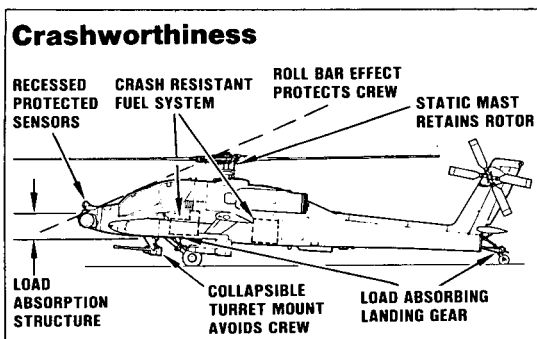
"I'm the only guy I know who only got shot down once. My roommate went down six times, and another guy in our wing lost nine birds. It was a daily event. There's no possible way to keep a helicopter flying in combat."

—An Army helicopter pilot in Vietnam

It is said that Army generals came to regard helicopters as flying tanks. "The helicopter's made of metal, so it must be indestructible, that's what they think," said Hoven, the Vietnam pilot. In fact the reverse



Prototype of the Hughes AH-64A. It will cost \$15 million, the price of a high-rise office building, and will be, many believe, about as effective against tanks. Below, AH-64A features as touted in a Hughes brochure.



proved true. Flying slowly and low over enemy positions, the helicopter exposed its numerous delicate components to easy destruction. Rifle bullets bounce off most warplanes, but they ripped up the (necessarily) lightly built helicopters. Ground gunners needed a bull's-eye to knock down a fighter, but it seemed that anywhere one hit a helicopter was sufficient to snap its delicate string to the sky. Hoven flew the most common Vietnam helicopter, the UH1 "Huey" transport. It could be shot down, he said, by as little as a single bullet to the exposed anti-torque driveshaft, loss of which caused the helicopter to lose directional control and "corkscrew" into the ground.

Army planners thought their Sky Cavalry could surprise the enemy by dropping troops right into the middle of a fight—"vertical envelopment." That's how most helicopters were employed in Vietnam, and the losses were staggering. "The drop might actually take only 30 seconds," Hoven said, "but during that time you were hovering right in front of the enemy, and he was shooting into your engines and right

through the door." (Losses during landings were the reason helicopter pilots could be shot down nine times and live to be shot down again. When their helicopters crashed, it was often from just five or ten feet.)

Officially the Army lost "only" 4,900 helicopters in Vietnam, an "only" that equals more than half the entire American helicopter inventory of 1966, one of the war's peak years. Pilots who were in Vietnam and Pentagon officials from the period say losses were systematically distorted—as, in this and so many other areas like "body counts," Vietnam seemed to have established lying and institutional self-deception as proud Pentagon traditions. The key to manipulating helicopter losses was the aircraft's tail, where its serial number was painted. If the tail could be recovered from a wrecked helicopter—and often it could—it would be shipped back to the States and a new helicopter built around it, knowledgeable Pentagon sources say. They contend that if losses had been reported accurately, tables would show that fully one-third of all helicopters stationed in Vietnam were shot down or crashed each year. That suggests a total loss more along the order of 10,000 helicopters.

"One week our unit, which had 25 birds, lost 17 of them," said Hoven. "Later I saw the *Newsweek* for that same week, and it had the official government 'body count' for helicopters. It said a total of six lost for all units. Mine was one of about 100 helicopter units."

Losses could have been reduced by plating more armor on the helicopters. Hoven's Huey, for instance, had only an armored seat and breast plate for the pilot; Cobra gunships had little more in the way of protection. But the problem was obvious. Every extra pound of armor meant a pound less of cargo or weaponry,

At the height of Vietnam, the Army was losing one-third of its helicopter force per year—not to sophisticated missiles, but to infantry rifles.

cutting even further into the helicopter's "capability." (The Huey, then and now the Army's main transport helicopter, could carry at most only 12 soldiers.)

Wanting to prove helicopters could be used for "strategic" movements of large numbers of troops, the generals often ordered flights of 40 or more Hueys protected by perhaps a dozen gunships. To keep losses within reason, a policy of "clearing LZs" (landing zones) was instituted. To drive the enemy back from the LZ before helicopters arrived, the area would be barraged with "suppressive" artillery fire and bombing attacks. So much, then, for the element of surprise. Often this practice proved entirely self-defeating. By the time large helicopter flights descended on the enemy who was supposed to be surprised, he had simply fled, having been alerted by the bombardment.

Lost in the Clouds

Not only did the Viet Cong (and later North Vietnamese regulars) shoot down helicopters at a prodigious rate, they did it with small-arms fire—automatic rifles and light machine guns they carried on their backs. "Everything we lost was to AK-47s [an automatic rifle] and .30-caliber machine guns," said Hoven. "Occasionally we lost one to an RPG [a small Soviet antitank weapon similar to a bazooka], but you didn't need an RPG to shoot us down. An AK-47 was plenty."

Officially the Pentagon insists that many helicopter losses were to heat-seeking missiles, implying, as the modern military establishment likes to do, that only a high-technology weapon can defeat another high-technology weapon. But in fact the North Vietnamese did not introduce heat-seeking missiles to the southern ground war until very near its end, around 1972. Which was a lucky thing for American pilots.

Missiles were used against American jets and bombers over North Vietnam, but helicopters did not operate in the north except during commando raids. Only on rare occasions did

they fly against fixed antiaircraft fortifications. When they did, the result was what pilots call a "turkey shoot"—catastrophe in large numbers. In February 1971, the Army launched Lam Son 719, a six-week massed helicopter "incursion" into Laos. Sky cav units encountered ground fire from dual .50-caliber machine guns and the ZU-23-2, a 23mm light cannon that is the Soviets' main portable antiaircraft weapon. Neither of these weapons has "advanced" features like radar or laser sights; they are just guns, aimed by gunners. They destroyed, officially, 107 helicopters and "damaged" 608 more. Pentagon sources say that little more remained of many of the "damaged" helicopters than a salvageable tail with serial number. For days at a time during Lam Son, relief helicopters were unable to approach stranded squadrons because they could not buck the ground fire.

Helicopters, when surprised by enemy fire, have considerable trouble maneuvering away. Because of their light airframes and fragile rotor assemblies, helicopters cannot make the sharp, drastic banking maneuvers airplanes use to evade fire. The most helicopters can "pull" is about 2.5 times the force of gravity; fighter planes can generally pull around 8 times gravity. Army planners thought they could compensate with the helicopter's unique ability to make a 180-degree turn, thus running directly away from fire. But this generally didn't work. What exposes an aircraft (or any target) to destruction is moving on a *predictable* course, so that enemy guns can be set slightly ahead of present position and the target will pass into their stream of fire. About-face maneuvers, while dramatic, were predictable. The helicopter was still flying the same straight line, just in the opposite direction. The back end got shot down instead of the front.

To protect themselves from ground gunners, Vietnam pilots adopted flying procedures Army planners were sure they wouldn't need. Sometimes they flew at around 1,500 feet—out of the effective range of small-arms fire, but also too high to command what was going on on the ground. Other times they flew treetop level at 115 m.p.h., coming over the enemy so abruptly ground gunners had no time to get a shot off. Flying treetop there was no chance whatsoever to scan the ground—the pilot's attention was utterly devoted to flying. One of the many complications of helicopter flight is that both the pilot's feet and hands are busy at every instant. Unlike an airplane, a helicopter has no autopilot to speak of, and certainly none at treetop level. Add to this that helicopters are deafeningly loud

and vibrate viciously, and it should be clear that operating them is, even under the best of conditions, a taxing job. (It is not well understood that what Marine helicopter pilots attempted during the Iran rescue raid—a 500-mile ground-level flight in the dark—was an immensely demanding physical and mental feat.)

The two compromises—flying either too high or too low and fast to see—effectively negated many of the helicopter's advertised features. Flying this way, helicopters were just doing a poor imitation of airplanes. But of course they could take off and land anywhere they wanted, couldn't they? Well, they certainly couldn't land in fire zones. The takeoff advantages did not always prove out, either. When fully loaded Cobra gunships were so unstable they could not rise straight up. They had to make running takeoffs, like airplanes. That meant they could operate only from central airbases; any old place would not do.

Even once at the target the vaunted Cobras were effective only against very lightly armed troops who could not drive them off. This Pentagon officials simply refused to believe. Sadly, Pentagon demands for Cobra "productivity" inspired some Army commanders to send their gunships against defenseless villages and even water buffalo to keep kill statistics up, as former Vietnam adviser and now



prominent military affairs commentator Jeffrey Record explained in an April 1971 *Washington Monthly* article. "I witnessed the machine-gunning of an entire herd of water buffalo," Record wrote, "along with six or seven buffalo boys who were tending the herd. No command had been given. The Cobras simply broke formation and began their deadly dives. Within seconds the still waters of the rice paddy in which the buffalo and their little friends had been resting were transformed into a bloody ooze littered with bits of mangled flesh. The dead boys and the water buffalo were added to the official body count of Viet Cong."

Yet throughout the Vietnam War, the Army continued to pour more and more resources into helicopters. Some Washington-based officers, deceived by reports that the water buffalo couldn't hold out much longer, really believed the helicopter was an effective weapon. Others, mesmerized by their interservice duel with the Air Force, just would not entertain the notion that their solution to Army aerial problems was fundamentally flawed. Meanwhile there was the budget to consider. Throughout the Army hierarchy, an informed former officer said, there was a feeling that Vietnam had at last won the budget spotlight back from the Air Force and Navy. Obviously the Army budget had to be expanded in order to prosecute the war. If they could drive that budget up high enough, the generals felt, it would remain high after the war was over, and the Army would never again be reduced to a subservient position in Pentagon politics. By far the most expensive item being used in Vietnam was the helicopter. Thus, perversely, helicopters became desirable for the very reason that they were so costly and crashing so often.

"Something as screwed up as the helicopter could only have come from something as screwed up as Vietnam," said a former Army helicopter pilot. But unfortunately, Southeast Asia was not the last stop for Air Oblivion.

Tanks for the Memories

The Army seldom had to fight tanks in Vietnam. But it knew that in almost any other war—especially in Europe against the Warsaw Pact, the most troubling possible war—this little luxury of doing business would be canceled. None of the Vietnam-era helicopters could challenge armored vehicles. The Cobra's machine guns, light cannon, and small unguided rockets could not pierce a tank's metal plating. And by the mid-1960s, the Air Force still had shown no interest in building a close-support airplane to destroy tanks; its head remained in the clouds. So the Army began to plan the fiercest, fastest, and most expensive helicopter of all time, the Cheyenne.

Cheyenne was to descend on tanks at 250 m.p.h.—unheard-of speed for a helicopter—blasting away with bombs and guided missiles. It would take on any tank the Soviets could build. It would also cost \$8 million or more per aircraft—at the time, a good deal more than top-of-the-line jet fighters.

And *that* finally got the Air Force's attention. When Air Force Chief of Staff J. P.

McConnell realized the Army was on the verge of getting funds for a multibillion-dollar aircraft program, it didn't take him long to figure out where the money was likely to come from—his budget. He also assumed that once the Army had an antitank helicopter (at least in name, regardless of whether it worked) it would be logical for the secretary of defense to take the close-support "mission" away from the Air Force. McConnell was caught in a classic quandary of Pentagon politics. To preserve his budget and prestige, he would have to order his officers to do something they despised—build a small, slow, simple plane. McConnell's subordinates viewed this as a total loss of honor. If they had been Japanese samurai, they would have committed ritual suicide on the spot. But instead they were modern bureaucrats. They committed ritual foot-dragging. Eventually McConnell had to end-run the Air Force R&D office, getting his close-support plane designed on an ad-hoc basis by contractors' engineers and a small band of rebel officers and analysts working nights. It was the only hope to "game out" the Cheyenne.

Soon Air Force test pilots were flying the Fairchild A-10, a dull, stub-winged, flat-nosed subsonic thing that many aircraft industry observers believe is one of the best planes ever built. It had what was supposed to be one of the helicopter's main combat virtues—being able to fly slowly enough to see what was going on down on the ground—but didn't have the helicopter's faults. The A-10 could turn violently to evade fire, accelerate to escape trouble, and take hits from antiaircraft guns without cracking like a pinata. Also, unlike a helicopter, it could carry a high-powered cannon, which is the best type of antitank weapon. And it cost about \$3 million, less than half the price of a Cheyenne.

So it finally had been done—the Air Force had been goaded into building a close-support plane. And the result was, as expected, an aircraft both better and cheaper than equivalent helicopters. Once again the Air Force "won" the interservice battle, although, for a change, it deserved to. Cheyenne was canceled *after* production contract awards had been made, one of the few times in U.S. history a weapon has been so glaringly bad that even the Pentagon had to admit it.

But as soon as the Air Force was finished protecting its turf, it reverted, like a former alcoholic going on a bender, to its old ways. Air Force high-tech types began to argue that, although in realistic combat tests the plane and its fearsome cannon proved highly destructive

(the A-10 gun had a 60 percent chance of destroying a moving tank in one "pass"), it just wouldn't, *just couldn't*, work without advanced weaponry. (To top the indignities off, the A-10's cannon functioned on the same principle as the Gatling gun!) So the planners equipped A-10 with a "smart bomb," the \$70,000 television-guided Maverick missile. Maverick proved to have about a 15 percent chance of destroying a tank in one "pass." It had lots of other drawbacks, too. To fire his cannon, the A-10 pilot had to fly a straight, predictable course for only about two seconds—just long enough to look through the cross hairs and pull the trigger. To fire a Maverick, he had to line up Apollo-program electronics while flying level for at least ten seconds, greatly increasing his chance of being shot down.

But the problem was manageable; field commanders assumed that in a real fight, pilots would simply ignore the ineffective missiles and use their cannon. A more troublesome problem, however, followed. With the Army challenge deflected, anti-close-support generals once again ascended within the Air Force. They wanted to stop wasting money on an Army-oriented project and reserve all Air Force funds for starship-class superplanes like the F-15 and B-1. So each year the Air Force tried to cut the A-10 from its budget. Fortunately each year politicians put the funds back in. (This year, for example, the Air Force cut 60 A-10s, but Defense Secretary Caspar Weinberger reinstated them.) Next the Air Force shunted 72 of the first 400 A-10s straight to the Air National Guard, the only front line aircraft ever assigned directly to reserve duty. Once again the message was loud and clear: we still don't care about protecting troops. Once again the Army began plotting ways to go after tanks with helicopters. Vietnam helicopter battle plans may not have made much sense, but the real wild-and-crazy stuff was yet to come.

The Cheyenne That Wouldn't Die

The Army decided it would equip present and future helicopters with guided antitank missiles—missiles of the same general type that A-10 pilots were finding nearly useless.

Army designers might have preferred to use a powerful cannon, as A-10 designers had. Cannons, after all, were the ideal antitank weapon. German Stuka pilots had terrorized American tanks in World War II, using airplanes with single-shot cannons: automatic cannons like A-10s, meanwhile, could fire as many as 70 rounds

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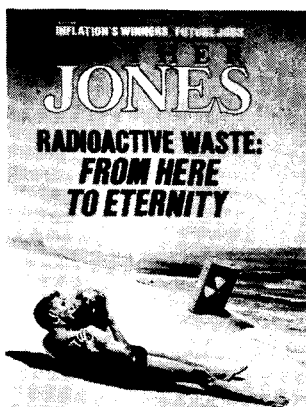
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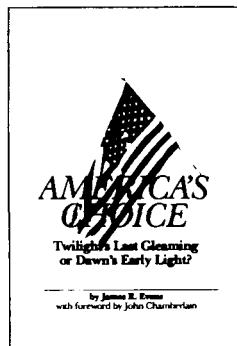
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per second. The advantage was obvious: with an automatic cannon, *you didn't have to have the target exactly lined up*. Pretty close was good enough. Automatic cannons were to guided missiles what the machine gun was to a marksman's rifle.

But helicopters couldn't carry a cannon as powerful and fast-firing as the A-10's. Its recoil would crack their fragile frames. Missiles, which fire without recoil, seemed to be the only choice. So the Army began to turn its Cobras into antitank weapons by equipping them with TOW missiles.

As readers of this magazine know, TOW had already replaced bazookas as the U.S. infantry's main antitank device (see "And If This Is Just Another Job..." by James Fallows, April). TOW is a good weapon for people who believe in divine intervention. It unravels a thin wire as it flies, enabling the gunner to control its course to the target. But as the gunner guides a TOW home, he must remain exposed to enemy fire. For an infantryman, this means standing up on the battlefield for ten seconds, which is about nine seconds too long. Now this concept was being adopted to helicopters. It meant hovering in the open air for ten seconds, which is about nine and a half seconds too long.

During the early days of the Iran-Iraq war, American-built, TOW-firing Cobras, flown by Iranians trained to standard U.S. tactics, were used against Iraqi tanks. At first the Cobras scored hits. But then, according to the defense industry bible, *Aviation Week*, Iraqi tank commanders simply learned to fire their .50-caliber machine guns at any helicopter they saw hovering. That was the end of that, *Aviation Week* reported. Cobras ceased to be a factor in the fighting.

There are times when the things military planners advocate become so astounding you have to wonder if those guys read the dosage instructions on their medication. After learning that helicopters traveling at moderate speeds and using moderate evasive tactics were sitting ducks to small-arms fire in Vietnam, TOW advocates now proposed having helicopters *hover* in full view of advancing Soviet battle formations—battle formations defended by countless machine guns and hundreds if not thousands of ZU-23-2s, the light cannon that tore up helicopters over Laos. (Also present on European battlefields will be the ZSU-4, a four-barrel version of the ZU assisted by radar.) Yet this plan carried the day. More than a thousand Cobras have been converted to TOW "plat-

"Every last one of them will be blown away in the first 30 minutes of a European battle," said a former Army helicopter pilot.

forms." Attack helicopters might have some useful functions in a European war, but the one function the Army is planning for, destroying tanks with TOW missiles, is not likely to be among them.

Perhaps, then, the answer is a different missile. One is in the works. Also in the works is an entirely new helicopter to carry it, the AH-64A, which might be called "Son of Cheyenne." Son of Cheyenne is everything Cheyenne was supposed to be ten years later, a pure antitank helicopter with cost no object. It will carry small unguided rockets and a 30mm cannon, although the cannon will not be used against tanks—its low "muzzle velocity" enables it to fire without damaging the helicopter, but also means the cannon rounds are traveling too slowly to break through a tank's armor. Son of Cheyenne's primary weapon will be the new antitank missile called Hellfire, a missile that seems destined to inspire all-new heights in "electronic battlefield" complexity.

Hellfire will be launched by Son of Cheyenne but controlled ("remotely designated") by a soldier on the ground, or still another helicopter. That way Son of Cheyenne will be able to dash for cover after releasing its missile ("launch and leave"). Of course, the soldier or other helicopter controlling Hellfire must remain exposed during the missile's flight. But that problem, Son of Cheyenne's designers seem to say, will be handled by another department.

Son of Cheyenne will have more armor than other helicopters of the Vietnam era, but not enough more. The problem remains: if you carry enough armor you can't carry anything else. Therefore, Army planners say, in Europe pilots will "use the terrain for armor" by flying "nap of the earth." Helicopters will seldom rise above 100 feet. They will hide behind hills and trees, then "pop up" to look around or launch a missile. They will quickly "pop" back down.

Unfortunately, "pop up," like about-face, is a *predictable* straight-line maneuver. When a gunner sees a helicopter pop up, he need only fire

beneath it to have a good chance of hitting it when the helicopter drops back down. Meanwhile, flying the “nap,” just barely above ground, might work if European battles take place under Maginot Line conditions, with Us on one side and Them on the other and a stripe running down the middle. Helicopters could stay on the Us side, safe from ground fire. But battle—especially armored battle—does not take place along straight lines. Armored battles more closely resemble a series of swirls, tank columns breaking through at various points (even the best armies suffer breakthroughs) and circling each other. Helicopters flying into the swirling confusion of actual combat will likely have considerable difficulty distinguishing that terrain which can be used as “armor” and that which is full of hostile nap-dwellers longing for an easy target.

Attack helicopters operating in Europe will have other problems with real-world battle conditions that the planners, unable to solve, seem to have assumed away. In Europe helicopters will not only be confronted with massed machine gun, cannon, and rocket fire, things they rarely faced in Vietnam, but also two things they *never* faced—jet fighters and other helicopters.

Helicopters operating in clear air stand no chance against jet fighters. Their only escape is to dive in among the trees, where fighters cannot follow. So in a sense Army helicopters in Europe will have no choice but to fly “nap of the earth.” But down low, besides making themselves prominent targets for ground gunners, they will also run into helicopters from the wrong side. Russian helicopters are more heavily armed and armored than their U.S. counterparts, but also bigger and less maneuverable—meaning they are even easier to shoot down than ours. Indeed, some defense analysts suspect the main role helicopters would play in a European battle would be to shoot each other down, and that it would all be over very quickly. Each side would expend its “one-time” high-tech weapons (mainly helicopters and missiles) in a brief flurry of destruction, then settle down to fighting something reasonably similar to World War II with its remaining tanks, artillery, and airplanes. Assuming, of course, that nuclear weapons were not employed. If you assume they will be, there’s no point in talking about helicopters at all.

Nostalgia for Vietnam

Ronald Reagan’s anything-goes defense budget has arrived, but so far all administration

officials have done is pump more money into the Air Oblivion system. The Army still can’t have the airplanes it needs, and the Air Force still won’t look after the Army’s requirements.

The Air Force is stalling the proposed CX transport plane project with all the resourcetulness of a civil servant delegated to cut federal salaries. *Armed Forces Journal*, hardly a home for softies, recently noted that the need for a \$20 billion B-1 program is debatable, but “virtually every Pentagon planner agrees the nation is critically short of airlift.” *AFJ* suggested that national interests might be served better by lots of dull cargo planes than by a few magnificent bombers. But Verne Orr, Reagan’s Air Force secretary (whose main qualification seems to be his experience as director of California’s Department of Motor Vehicles) is already in full swoon before the Air Force generals. He speaks of cargo planes as if they were a free cocaine program for juvenile delinquents. Orr recently suggested that instead of building new transport aircraft the Air Force could plan to “commandeer” some “747s and planes like that” in the event of an emergency.

Air Force generals still seem embarrassed by the success of their own A-10 program, giving the Army the edge it needs to build political support for the AH-64A Son of Cheyenne. Coming in at \$15 million-plus per aircraft, Son of Cheyenne will cost more than *twice* as much as an A-10, which now runs at \$7 million. More important, it will be nowhere near as *good* as an A-10—less effective against tanks and much easier to shoot down. But it will be dressed in Army greens instead of Air Force blues, and that, not national security, is what the issue is all about.

“Now they’ve got ‘Army Aviation’ and they’ve got their revenge for losing the Army Air Corps and whether helicopters can survive in a stiff breeze is none of your damn business,” said a former Army officer dryly. The current Army basic operations manual, FM 100-5, states that “with combat experience in Southeast Asia, *the U.S. Army is the world’s foremost exponent of airmobility*” (italics in the original). That the Army should actually boast of its Vietnam helicopter fiasco, and use it as justification for the present helicopter buildup, is nearly beyond comprehension. But at least the Vietnam reference puts things in perspective. If Air Oblivion flies again in a future war, its helicopters will be crashing—and American soldiers needlessly dying—in numbers that will make Vietnam seem like the good old days. □



❖ AARPscam ❖

Perhaps the ideal client, from many lawyers' perspectives, would be someone who didn't even know he was in the case—so he couldn't possibly object to anything his lawyer did. That may sound like a hypothetical situation, but it's become reality in a New York courtroom. There an obscure but potentially far-reaching lawsuit is about to deprive more than 13 million senior citizens of some of their legal rights. The case is ostensibly a class-action suit on "behalf" of senior citizens. In fact, they will gain nothing from it; only the

Tony Capaccio is a staff associate for columnist Jack Anderson.

The little-known lawsuit that's fleecing millions of senior citizens

by Tony Capaccio

lawyers and organizations involved will benefit. And few of the 13 million "clients" will be aware that their rights have been bargained away for nothing—until it is too late.

This strange situation is the result of a class-action suit filed in 1977 against the American Association of Retired Persons (AARP) by lawyers representing senior citizens who had been deceived in the marketing of AARP-backed group insurance. Around that time, news stories from a variety of sources had revealed that AARP, sup-

posedly a nonprofit educational and fraternal association for senior citizens, was actually little more than a sales tool for Colonial