



# U.S. ARMY AIRMOBILITY IN THE VIETNAM WAR

## PART 1 OF 3



UH-1 Hueys flying in close formation in preparation for an air assault. Door gunners maintain watch as the helicopters fly over Vietnam's terrain. (Courtesy of the Army Aviation Museum)



Pictured here as a Major General, Lieutenant General James Gavin was instrumental in shifting Army thinking toward the use of helicopters. He famously wrote "Cavalry, and I don't mean horses" in the April 1954 issue of Harper's Magazine. (Courtesy of the Pennsylvania State Archives)

*The armies of the world no longer need be tied to the ground.*

— Lieutenant Colonel Robert R. Williams, Army Aviator, 1952

The United States Army is an organization of movement. Mobility grants the Army capability, adaptability, and lethality within its area of operations. Whether rapidly transporting infantry to the battlefield, providing supporting fires, supplying servicemembers with vital provisions, or evacuating the wounded, mobility is vital to the Army's success. On 20 September 1954, Secretary of the Army Robert Stevens spoke before the National Defense Transportation Association, where he stated the Army was "on the threshold of a degree of strategic and battlefield mobility unparalleled in military history." Stevens was talking about the helicopter. The Army first employed rotary aircraft in mass during the Korean War. In the years that followed, the Army invested heavily in manpower and research to advance and incorporate helicopter technology into its concept of operations. By the onset of the Vietnam War, the Army's in theater concept of operations centered on the helicopter.

### Contested Roles and Missions

The Army's adoption of the helicopter was far from guaranteed. Following the U.S. Air Force's establishment in 1947 as an outgrowth of the U.S. Army Air Corps, the Army and Air Force engaged in extended and contentious discussions. Seeking to define, advance, and defend its organizational culture and mission, the Air Force sought to limit Army Aviation and act as the principle means by which the U.S. achieved air dominance throughout the Cold War. For the Army's part, the service increasingly saw the developments of organic aviation assets as vital to its success.

Prior to the Korean War, the two services clarified aviation roles over a series of meetings and memorandums. Most notable were the Key West Agreement in 1948, and two memorandums of understanding in October 1951 and November 1952. These organizational understandings led to an expansion of Army mission roles and aircraft capabilities, yet Army and Air Force joint regulation agreements continued to limit Army aviation. For instance, Army helicopter weight was not to exceed 4000 pounds, which limited the helicopter's overall size, engine power, range, and capabilities.

The Army primarily relied upon the H-13 Sioux in Korea, a helicopter that served in a number of roles including aerial observation and reconnaissance, laying wire, transporting supplies and equipment, and emergency aeromedical evacuation. For its work saving lives of the wounded, the H-13 earned the moniker "Angel of Mercy." Known for its distinctive soap bubble canopy; in addition to serving in Korea and Vietnam, U.S. audiences became familiar with the "Angel of Mercy" during the opening credits of the television sitcom "M.A.S.H."

### The Nuclear Battlefield, Dispersion, and Airmobility

The threat of nuclear weapons on the battlefield hastened the Army's search for greater mobility. Army thinkers such as Lieutenant General James Gavin believed that if the Army came under attack from nuclear weapons in the form of bombs, guided missiles, or artillery



An external litter pod on an H-13 Sioux helicopter. The helicopter was able to carry two litter pods, and these were often fitted with acrylic glass to insulate the medical evacuee from the cold environment. (Courtesy of U.S. Army Medical Department)



To be successful, the U.S. Army required dispersion on the nuclear battlefield. Here the U.S. Army's 280mm artillery fires a 15 kiloton nuclear armament XX-69 GRABLE on 25 May 1953 at the Nevada Test Site. (Courtesy of National Nuclear Security Administration)

projectiles, against such destructive power, the general surmised, "the only counter-measure possible is to reduce drastically the numbers of soldiers per square mile in the battle area." The helicopter provided the Army with an answer to the nuclear threat, it enabled the Army to rapidly disperse and reconstitute. As military planners devised new ways to employ helicopters, the Army rapidly expanded its aviation school and incorporated helicopters with greater size, capacity, and range into its force structure. To screen and protect its aviation and ground forces, the Army developed armed escort helicopters. The Army's development of airmobility anticipated a nuclear war with conventional forces fought in Europe against the Soviet Union. As it turned out, airmobility arrived for an unconventional, low-technology war in Southeast Asia.



H-21 helicopters contour-flying to the landing zone, where Army Republic of Vietnam troops off-load near Ap Loi An, 20 miles south of the staging area, 17 April 1963. (Courtesy of the National Archives)

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An infantryman and radio operator look above to UH-1 "Hueys" flying in formation. (Courtesy of the Army Aviation Museum)

*The Board has only a single, general conclusion. Adoption by the Army of the airmobility concept...is necessary and desirable. In some respects the transition is inevitable, just as was that from animal mobility to motor.*

—Howze Board 1962

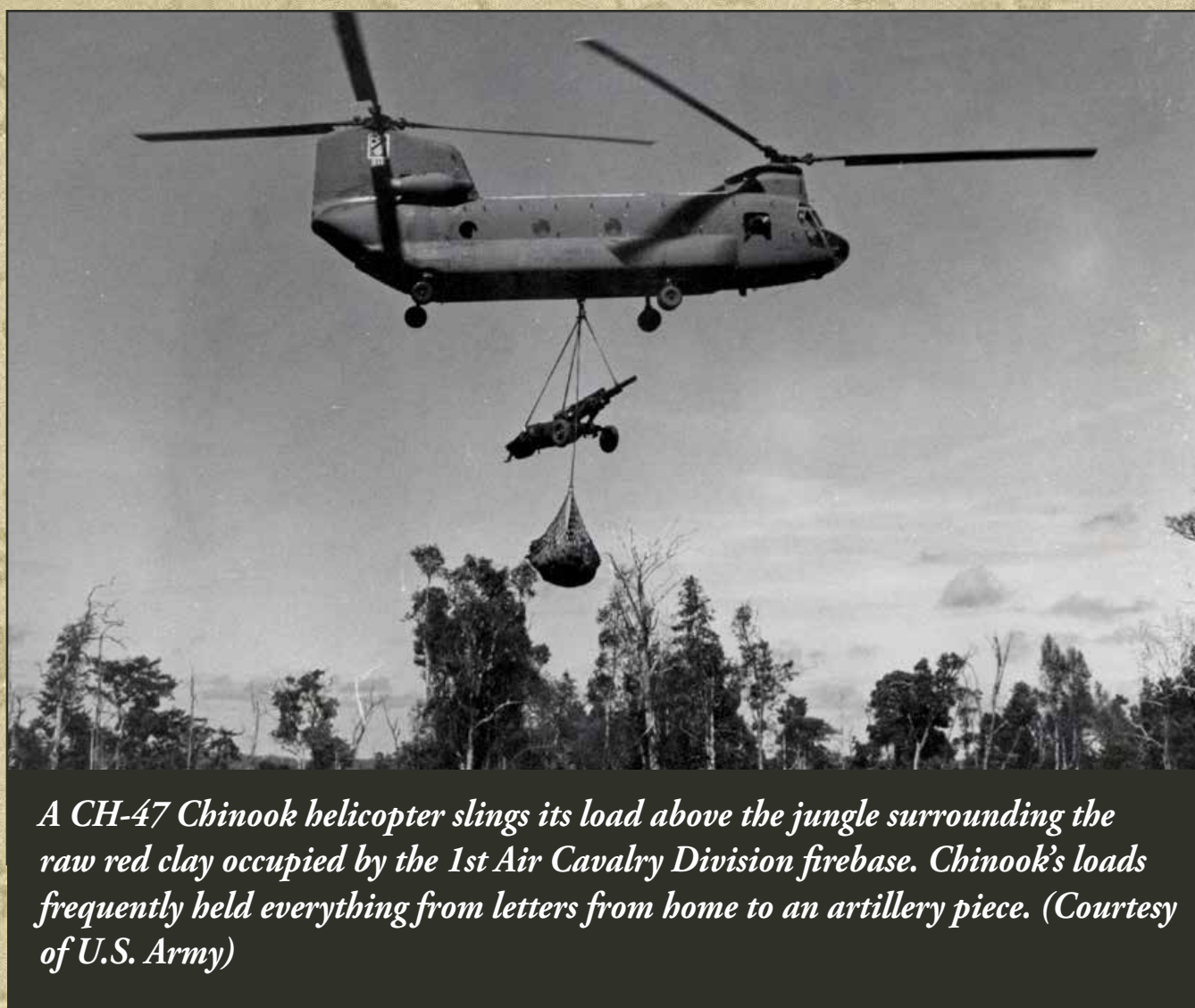
### The Howze Board

In April 1962, Secretary of Defense Robert McNamara issued a memorandum to the Secretary of the Army directing the service to thoroughly examine the potential for airmobility. Known for his devotion to efficiency, McNamara believed the Army needed to reexamine its aviation requirements and conduct analytical studies, exercises, and field tests to obtain maximum mobility in the combat area. To initiate these studies, McNamara established the Army Tactical Mobility Requirements Board, or the "Howze Board."

The Howze Board (named for its chair, Lieutenant General Hamilton Howze) quickly got to work. The board submitted its final report on 20 August 1962. This dense and meticulous work endorsed the creation of the airmobile division as the next logical step to the Army concept of operations. In the airmobile division, all equipment was light enough to be carried by helicopter. In Vietnam, airmobility received its first test, and though the Army employed many helicopters in theater, the most famous was the UH-1 Iroquois, known far more commonly as the "Huey" due to the pronunciation of its original designation: "HU-1." Although the Army's 1st Cavalry and 101st Airborne Divisions were designated airmobile divisions, most Army units employed some degree of airmobility.

### Logistics and Transportation

The Army's Logistics Branch and Transportation Corps were among the earliest to grasp the helicopter's potential. Overseas Cold War deployments sent the Army into remote locations which possessed limited infrastructure. These locales threatened to bog down a roadbound military and compromise its fighting strength by forcing it to develop and defend road networks. The helicopter permitted the Army to transcend the landscape and expand its area of operations. In Vietnam, the Army created an aerial supply network. The CH-47 Chinook and CH-54 Tarhe (more commonly known as the "Skycrane") provided medium and heavy lift capabilities. With the capacity to haul tons of weight, these helicopters became the Army's workhorses. In addition to delivering vital provisions, the helicopters lifted 105



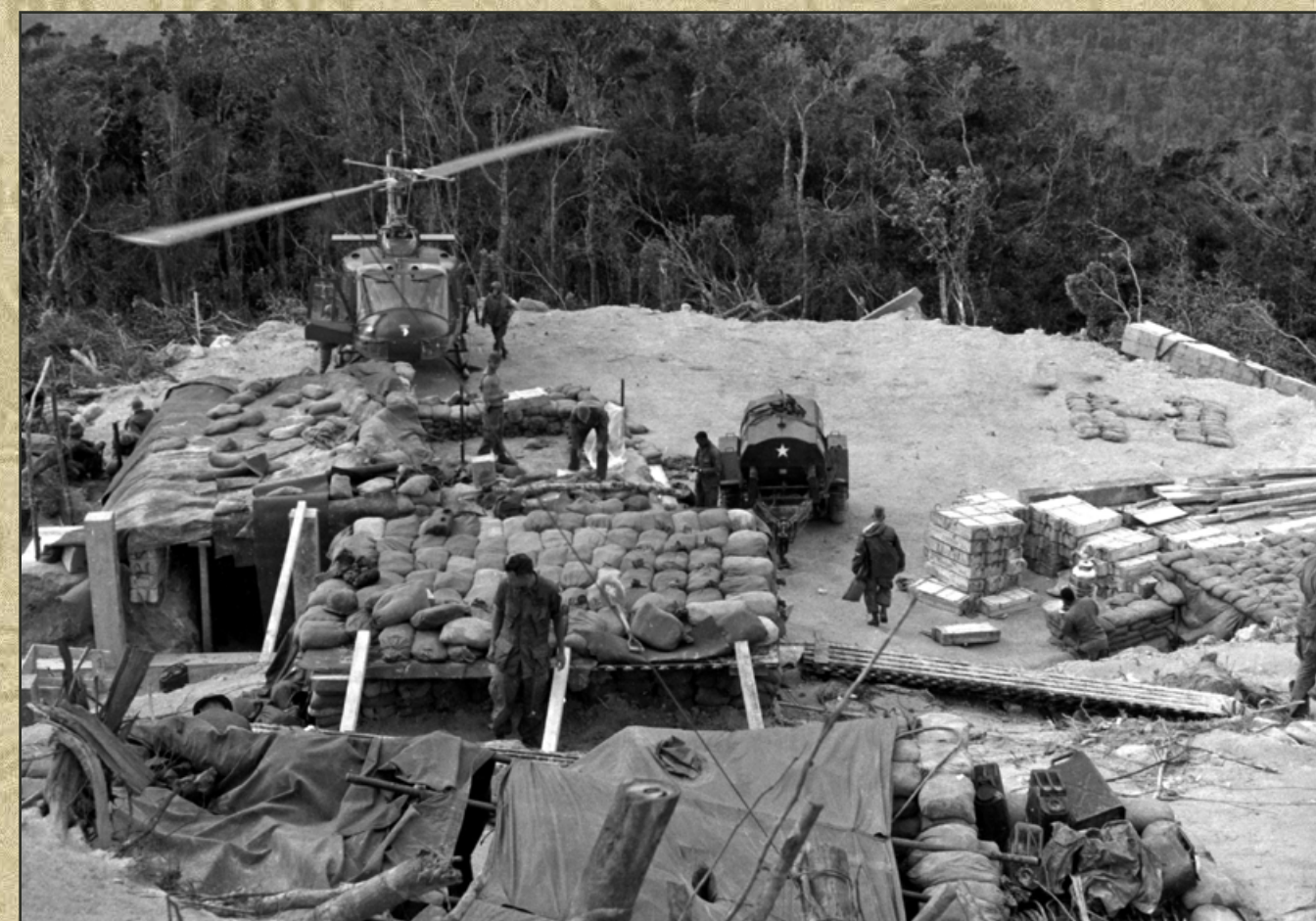
A CH-47 Chinook helicopter slings its load above the jungle surrounding the raw red clay occupied by the 1st Air Cavalry Division firebase. Chinook's loads frequently held everything from letters from home to an artillery piece. (Courtesy of U.S. Army)

millimeter and 155 millimeter artillery to establish fire support bases, often on Vietnam's high ground. Fire support bases provided accurate and devastating artillery fires in the support of infantry operations.

In Vietnam, the U.S. Army created a vast aerial supply network that served as a benchmark for future Army operations. In contemporary operations, the Army employs Forward Operating Bases and Combat Outposts, which it supplies through a variety of aerial means, including the Chinook, which is one of the few aircraft developed in the 1960s that is still on duty to this day.

### Armed Reconnaissance

Before joining as a single team, observation helicopters flew together in what were called "white" teams while gunships flew in "red" teams. In 1967, when the OH-6 Cayuse observation helicopter and the AH-1 Cobra attack helicopter arrived in Vietnam, the two helicopters joined to perform armed reconnaissance as "pink" teams. The agile



Helicopters enabled the U.S. Army to establish and supply fire bases on high ground entirely from the air. These bases became instrumental in providing artillery support to infantrymen in the field, and, owing to their destructive capability, were high value targets for the North Vietnamese and Vietcong. (Courtesy of the Army Aviation Museum)



A CH-54A "Skycrane" (also known as "Flying Crane") lowers its hook to recover a U.S. Air Force plane in Vietnam, circa 1966. (Courtesy of U.S. Army)

Cobra supplemented Huey gunships, whose weapon systems made them unwieldy. For its part, the OH-6 replaced the OH-13 Sioux and was commonly referred to as the "Loach,"—the helicopter's nickname derived from having won the 1962 U.S. Army Light Observation Helicopter Competition.

During the Vietnam War, most combat aircraft attempted to fly at altitudes and speeds great enough to avoid ground fire, but the "Loach" flew low to draw out enemy fire and locate them. Once the enemy engaged, the "Loach" pulled away and marked the target by dropping smoke grenades. Then the lethal Cobra swooped down and attacked using rockets and, where necessary, a rapid firing minigun. Often the "pink" team flew ahead of "Hueys" carrying troops to observe, engage, and clear a path. The "Hueys" also conducted evacuation missions, if a "Loach" or Cobra was downed by enemy fire.



The OH-6 "Loach" and the AH-1 Cobra were among the Army's most maneuverable helicopters in Vietnam. However, due to the nature of their mission, they were also among the most vulnerable. "Loaches" were particularly exposed due to their low flight paths to spot the enemy and draw fire. (Courtesy of the Army Aviation Museum)

Armed helicopter reconnaissance proved its worth in Vietnam, and continues to find use in contemporary operations. The OH-58 Kiowa saw service in Vietnam as the "Loach's" replacement; its D variant, the Kiowa Warrior, acted as an assault reconnaissance helicopter in support of ground servicemembers in Iraq and Afghanistan until retirement in 2017. Like its predecessor's pairing with the Cobra, the Kiowa frequently joined with the Army's current attack helicopter, the AH-64 Apache.

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Open terrain exposed helicopters, their crew, and dismounting infantry to enemy fire. Air assaults required close coordination for helicopters to land, dismount troops, and depart expeditiously. (Courtesy of the Army Aviation Museum)

*The Huey, the Cobra, the light observation helicopter, and the Chinook were the essential vehicles of airmobility combat and combat support.*

— Lieutenant General John J. Tolson, 1973

### Aeromedical Evacuation

The U.S. Army's medical practices evolved out of the "Letterman System," named after Major Jonathan Letterman, Medical Director of the Army of the Potomac, who recommended sweeping reforms to the ambulance system during the Civil War to create an orderly group of medical clearing stations to the immediate rear of the Army's frontline units. Ambulances were to bring all casualties to the clearing stations as safely and quickly as possible, and the clearing stations in turn would determine the casualty's needs. This process was called triage. From the Civil War through the World Wars, U.S. Army ambulances transported casualties by land. The Army's successful employment of H-13 Siouxes in Korea led the service to build a helicopter ambulance capable of transporting the injured and medical personnel. Vietnam's lack of secure roads and the remote locations of much of the fighting ensured its use.



Prior to Vietnam, casualties would be removed from the battlefield and taken to a nearby aid station before extraction. In Vietnam, aeromedical evacuation often came to the wounded near the point of injury. (Courtesy of the Army Aviation Museum)

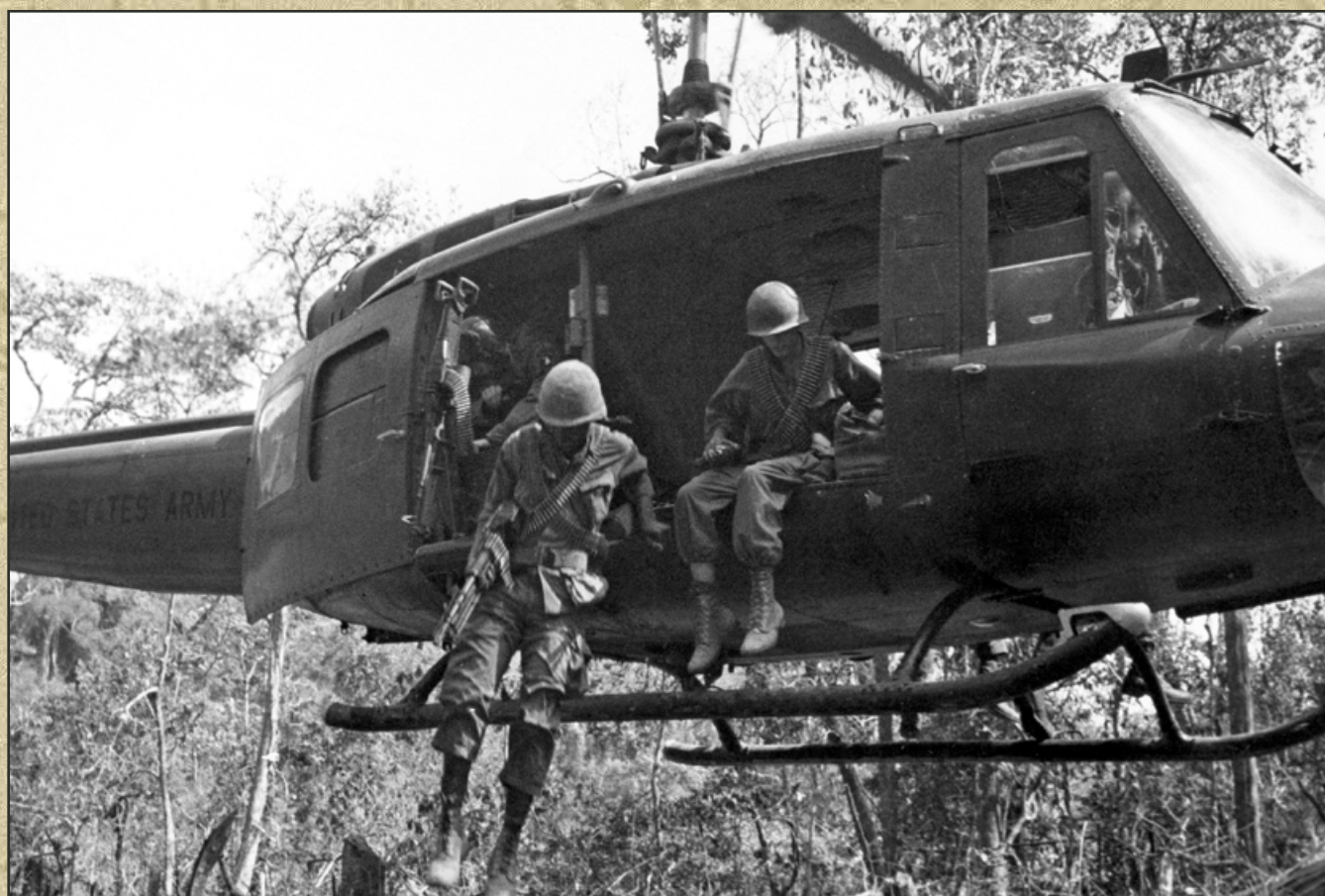
Originally, incoming aeromedical units identified themselves by the signal "Army" followed by the last digits on the aircraft (i.e., Army 789). In late 1963, Major Lloyd Spencer, then the 57th medical Detachment's Commander, decided to standardize the 57th's call sign. Since the 57th Medical Detachment operated in dusty locations in Vietnam, Major Spencer designated the call sign "Dust Off," a nickname that soon became part of military parlance.

Major Charles Kelly and his successors, including Medal of Honor recipients Major Patrick Brady and chief Warrant Officer Michael Novosel, popularized the term "Dust Off." Previously, during the Korean War, the Army landed aircraft in secure locations to retrieve stable patients and fly them to hospitals in rear areas. In Vietnam, daring pilots snatched the wounded from the point of injury, often at "hot" landing zones under enemy fire. In some cases, "Dust Off" pilots made multiple stops on a single mission to evacuate as many patients as possible. In total, the 57th Medical Detachment evacuated more than 100,000 patients during its 11 years spent in Vietnam.

Although the 57th Medical Detachment could not have fathomed it at the time, "Dust Off" became the term that remains the Army's call sign for aeromedical evacuation to this day. In the Army's current lexicon, "Dust Off" is synonymous with hope, the idea that "help is on the way."

### Air Assault

The Army conducted air assaults to rapidly close with and destroy the enemy. Air assault missions required unified logistical, transport, reconnaissance, and aeromedical helicopter support. The Chinook supplied fire support bases, and the infantry in turn called upon artillery support frequently; the "Loach" and Cobra conducted reconnaissance



Vietnam ground conditions, to include mountainous terrain or waterlogged paddies, frequently forced UH-1 "Hueys" to hover off the ground as infantrymen dismounted. (Courtesy of the Army Aviation Museum)



A CH-47 Chinook helicopter lifting off with a 105mm howitzer, Vietnam, 1967-1968. (Courtesy of U.S. Army)



Cobra gunships provided escort for UH-1 Huey formations, their maneuverability and formidable arsenal supported helicopters and ground troops alike. (Courtesy of the Army Aviation Museum)

and, if necessary, engaged the enemy from above; and the "Huey" inserted soldiers on the battlefield and retrieved the wounded.

Reconnaissance attempted to mask the air assault's movement to retain the element of surprise. Reconnaissance also determined separate points of entry if the enemy defended the chosen landing zone. To avoid revealing their location for fear of Cobra attack, the enemy often sought to ambush United States forces at the point of landing. Sometimes the enemy mined landing zones or drove stakes into the ground to render them inoperable.

"Hueys" frequently flew in a "V" formation because it improved versatility and observation. Army helicopter pilots trained to synchronize their landings; to land one at a time singled out the helicopters for enemy altitudes, rotor wash during descent, landing zone size, and, most importantly, enemy resistance. On landings, Lieutenant General John Tolson wrote, "two minutes were considered average unloading time for a twelve-ship formation. This two minutes seems an eternity when one is expecting enemy fire any second."

Army pilots flew thousands of missions in Vietnam, it is safe to say there were thousands of eternities. Their courage, professionalism, and dedication to the mission forged Army Aviation's legacy. Air assaults are a staple of the Army's operations to this day.

### Conclusion

Vietnam is justifiably known as the "helicopter war." In addition to the U.S. Army, the Air Force, Navy, and Marine Corps also employed helicopters in medical, logistical, and combat operations, though the Army possessed the most helicopters by far. True to its namesake, airmobility came to embody the Army's concept of operations in Vietnam. To find, close with, and destroy the enemy, the Army employed helicopters to carry soldiers to battle, supply its units, establish and sustain fire support bases, observe and provide gunship support, and conduct aeromedical evacuation. In performing all of these functions, the helicopter earned its place in the U.S. Army's organizational structure and achieved its greatest legacy: the helicopter is a fixture in all contemporary military operations.

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