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## Helicopters, a decisive factor for tactical mobility: the Colombian case (1997-2012)

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## Helicopters, a decisive factor for tactical mobility: the Colombian case (1997-2012)

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El helicóptero como factor decisivo para la movilidad táctica:  
el caso colombiano (1997-2012)

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**ABSTRACT.** For an army, mobility and its respective effects on operational and strategic results are determining factors in executing missions at the tactical level. They are especially paramount in counterinsurgency warfare, given the difficulty of the confrontation terrain. This article studies the change in the Colombian Army’s tactical air mobility from 1997, when it began to incorporate helicopters, until 2012. It presents the background of the use of aircraft for military purposes and the experience obtained by Colombia in the Korean War. The study’s results show how the progressive acquisition and implementation of helicopters in the Army favorably impacted the armed confrontation after the difficult last five years of the nineties.

**KEYWORDS:** armed conflict; military aviation; military operation; military tactics; tactical air mobility

**RESUMEN.** Para un ejército, la movilidad es determinante para ejecutar misiones en el nivel táctico, con sus respectivos efectos en los resultados operacionales y estratégicos. Esto es especialmente primordial en la lucha contrainsurgente, dada la dificultad del terreno en el que se lleva a cabo la confrontación. Este artículo estudia el cambio en la movilidad aérea táctica del Ejército colombiano desde 1997, cuando se comenzó a incorporar helicópteros, hasta 2012. Se presentan los antecedentes del uso de aeronaves con fines militares, así como de la experiencia obtenida por Colombia en la Guerra de Corea, y luego se presentan los resultados del estudio, que muestran cómo la progresiva adquisición e implementación de helicópteros en el Ejército tuvo un impacto a favor en la confrontación armada, luego del difícil último lustro de los noventa.

**PALABRAS CLAVE:** aviación militar; conflicto armado; movilidad aérea táctica; operación militar; táctica militar

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## Introduction

*One of the helicopter's most important vocations is participating in the Army's tactical action on the ground. For the latter, it is not a traditional means but rather a piece of equipment freed from the constraints of the terrain, which, when integrated into the troops' maneuver, gives them greater mobility and speed. Herein lies the whole concept of aeromobility.*

Louis François Legrand

In analyzing the Army's evolution and professionalization in recent years, particularly since the beginning of the 21st century, the increase in its mobility and maneuvering capacity is noteworthy. This aspect has allowed the Army to execute large campaigns and military operations with notably increased effectiveness, after the problematic law and order situation at the end of the last century, when the illegal groups –strengthened by the boom in the drug trafficking business– were determined to put the State in check.

This article shows the helicopters' role in achieving greater air mobility capability and its impact. Especially at the ground operations tactical level, where aviation was integrated as a fundamental element in the maneuvers of the Colombian National Army (EJC in Spanish) to generate greater combat power for ground units. First, it addresses some concepts presented by renowned thinkers and academics to review the theory on the subject in question from different perspectives and what has been doctrinally determined within the EJC. Secondly, it explains the methodology implemented for the military historical analysis carried out in the research, followed by the historical background on tactical air mobility in the military and the role of helicopters in providing greater maneuverability and flexibility in executing ground operations.

In fourth place, it presents an overview of air mobility in the Colombian Army during the second half of the 20th century and its evolution since the involvement of the Colombia Battalion in the Korean War. Then, it reviews the events from 1997 to 2012, from the arrival of the first helicopters acquired by the Army and the subsequent implementation of *Plan Colombia* to these aircraft's nationalization process. This section analyzes the helicopters' integration into the combined arms equipment and its impact within the Force and its effect on the counterinsurgency conflict results. Finally, it discusses the results and some conclusions related to the article's central

question: Has the participation of helicopters been decisive in the tactical mobility of the Colombian Army?

## **A general review of theoretical concepts**

For any army, mobility is a factor of undeniable importance for the success of a military campaign. On the contrary, the impossibility of maneuvering within a theater of operations with the freedom and flexibility required by the commander guarantees the failure of the proposed tactical objectives, with subsequent effects at the operational and strategic level. Sun Tzu, for whom mobility was crucial, defined his conception in the following terms:

When troop mobility is difficult, and the enemy is more familiar with the territory, the advantage in battle will be on the enemy's side. Attacks must be launched with overwhelming speed, and appropriate plans must be thought out in-depth. (Kaufman, 2010, p. 13)

For Karl von Clausewitz (1999), the Army's deployment and disposition constitute one of the most critical points in the conception of a battle. To this author, the adversary's advantage, granted by the familiarity with the terrain and mastered through a previous deployment, can be overcome by the opposing army's greater maneuverability, which allows for the possibility of venturing into adverse terrain, granting superiority to the offensive over the defense (Clausewitz, 1999). It is indisputable that this thinker's concept and reference in the study of war is still valid today.

In terms of counterinsurgency warfare, it is pertinent to cite David Galula's ideas. For him, a highly mobile infantry is paramount within a regular force to counter the advantage and dominance that an insurgent group may have on the ground. In this regard, Galula (1964) stresses the importance of the performance of transport helicopters and their vital role in counterinsurgency operations. For Galula, the use of transportation means, particularly helicopters, allows the deployment of capabilities and the effective use of force combined with mobility. The saturation of the battlefield with these capabilities against subversive structures is another fundamental aspect in counterinsurgency combat for this author. He also considers the use of transportation means for logistical capabilities support vital to avoid early attrition and the loss of attained tactical gains, especially when the confrontation takes place in difficult access terrain.

An army's tactical air mobility is a recent topic, considering that aircrafts made their appearance only at the beginning of the last century. A few years later, their use in the military field began. According to the American researcher Adam Givens (2019),

tactical mobility through aerial means was conceived in the U.S. Army in the 1950s as part of a process of military innovation. With the implementation of helicopters, ground forces could rapidly deploy attacks into enemy territory with personnel, equipment, and logistical support to seize and hold key objectives. In this sense, Givens suggests that air mobility is a relevant topic of study related to military innovation in the modern era. He considers technology as one of the major obstacles on the road to an airmobile-capable military. Thus, the development of tactical air mobility in its early years was directly related to the industry's ability to produce new and better helicopters to meet the need to deploy and maneuver freely on the battlefield.

To highlight the current importance of tactical mobility, it is worth noting the doctrinal concepts that frame the actions of the Colombian Army today. These establish that the terrestrial domain, where the vast majority of the operational variables affecting the development of a campaign reside, has particular physical aspects that greatly affect the troops' mobility, among other factors (EJC, 2017a). Consequently, having sufficient mobility allows efficient and effective tactics, despite the adverse terrain during the execution of the maneuver.

The Damascus doctrine<sup>1</sup> implemented by the National Army considers the effects of mobility, initially, in developing tactical level tasks and using its organic means. However, it also notes the dependence on other forces (such as the Air Force) for strategic and operational mobility (EJC, 2017b). The *MFRE 3-0 Fundamental Army Reference Manual* emphasizes deployability's importance in ground maneuvers by stating that "the ability to project power across operational distances allows multiple dilemmas to be presented to the enemy, as with mobility [...] the forces reach unexpected places" (EJC, 2017b, pp. 4-45). Thus, mobility allows overcoming the adversary's different defensive measures on the battlefield by employing lethal actions from unexpected and dispersed positions while maintaining communication and joint support. It also allows swift and timely repositioning through the available means of transportation, especially helicopters, given that the jungle and mountainous terrain reduce the troops' mobility.

## Military historical research methodological design

The methodology for military historical research does not differ much from the elements of general historiography. Salas (1989) points out that military history is no different from political, economic, or social history. Thus, those who delve into it must

1 The Damascus doctrine consisted of a revision, updating, and hierarchization of the doctrine carried out by the National Army, resulting from a deep analysis of future challenges and threats. A series of manuals were launched starting in 2016 from this exercise. They are currently part of the Army's doctrinal base.

necessarily use the same instruments and consult the same sources. From its approach to its data collection instruments, this study follows the methodological framework of military history.

The chosen method was historical-critical analysis. According to Ramírez Bacca (2010), this analysis is understood as “the chronological succession of events in different stages, which allows us to understand the evolution and development of the object of research and contextualizes or problematizes the phenomenon or case study” (p. 43). This method allowed for an in-depth study of the object of investigation: the helicopter as a decisive factor for tactical mobility, in the historical context indicated: 1997 to 2012.

The historical sources used are normative documents issued by the National Planning Directorate, the Army Command, and the Air Assault Aviation Division, articulated with historiographic sources, including books, book chapters, and research and review articles. These sources were described based on information gathering techniques, such as documentary records and specialized analytical summaries. Each of the sources was rigorously chosen and, following historical criticism, presented in the document’s different sections.

## Background on helicopters’ evolution in tactical air mobility

The appearance of aviation in the world, right at the beginning of the 20th century, brought various benefits in different areas. One was the military. Deployment in a war confrontation of the first aircraft produced—all fixed-wing<sup>2</sup>— took place within the framework of the First World War. With the subsequent development of the aviation industry, their role was more prominent during World War II (Davis, 2019). However, the air support they provided the armies in the military campaigns during these two world confrontations mainly impacted the strategic and operational levels of warfare without directly affecting the troops’ mobility and tactical maneuvers.

After several years of evolution in the aeronautical industry and the initial development of the gyroplane in the 1920s, the helicopter made its appearance during the 1930s. It reached significant maturity in the early 1940s, beginning the Second World War (Legrand, 2000). Since then, its use became widespread in the military field. It became a tactical support instrument for troops on the battlefield, thanks to its ability to take off and land with passengers and cargo in confined and difficult access spaces,

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2 Globally, aircraft are generally divided into two major groups. The first includes *fixed-wing aircraft*, designed with fixed aerodynamic wings that use the aircraft’s forward speed to generate lift. The second includes *rotary-wing aircraft*, which have a rotor (some have two) on top of the fuselage. The rotational movement generates the speed to produce the lift necessary for flight. It is worth mentioning that there are aircraft that combine these two designs into one; they have both fixed and rotary wings.

in addition to its ability to fly close, slow, and even stand still above the ground. By integrating the helicopter as an organic part of ground maneuvers, ground units could bring their supply lines closer and extend operations in time and depth.

A few years after its invention, during the Second World War, the Germans and Americans developed some basic helicopter models, which they used to make experimental incursions, without a notable role in the confrontation. Its use during this period did not allow a significant evolution in military doctrine and application in warfare. However, it did generate the first reflections on the subject, which did not take long to be implemented. Just five years after the end of World War II, during the Korean War (1950-1953), rotary-wing aircraft were tested in a more prominent role in a conflict scenario (Rottman, 2007). On that occasion, U.S. Army and U.S. Marine Corps employed helicopters, such as the Sikorsky H-19 *Chickasaw*, also known as the S-55, evidencing various advantages in the use of this aircraft in complicated geographies such as the Korean peninsula:

The helicopter arrived to offer a new way of conducting battle. Over a very rugged terrain, with mediocre cartography, it allowed the command a better knowledge of the situation and a closer presence to the soldier. Numerous isolated units could be resupplied with food and ammunition. (Legrand, 2000, p. 1)

This innovative transportation means also allowed external cargo operations to transfer artillery guns, extending their range and achieving greater coverage and depth in the tactical missions carried out by the U.S. Army and Marines. In the Korean peninsula, the difficult terrain (broken and jungle-like) caused significant inconveniences in terms of depth of operations. The guns' effective range was limited to where they could be transported by land. These aircraft allowed moving the weapons to the critical points required by the deployed troops to cover their maneuver.

Thus, the helicopter proved to be the most outstanding tactical innovation deployed in the Korean ground war (Legrand, 2000), enabling greater troop mobility in this complex scenario. Moreover, this rotary-wing aircraft made the rescue of wounded soldiers and aircraft pilots shot down on the battlefield possible, positively impacting the troops' morale. During this same period, the French followed the Americans' example and used helicopters during the last years of the conflict in the Indochina peninsula and Algeria. On this occasion, its use was limited basically to medical and search and rescue missions.

With the growth of the aviation industry, particularly the rotary-wing industry, helicopters became more versatile for military missions. These aircraft's capacity for

transporting personnel and cargo increased, especially with the introduction of turbine engines to replace piston engines, which offered more benefits in operations.

The Vietnam War was the next theater of war in which the helicopter participated. The Americans participating in this conflict were confronted with a counterinsurgency-type struggle in unknown, broken jungle terrain. In this scenario, the employment of helicopters, such as the CH-21B *Shawnee*, CH-37B *Mojave*, CH-47A *Chinook*, CH-54A *Tarhe*, UH-1 *Iroquois*, and the AH-1 *Cobra*, was vital to the ground units' tactical maneuvers. Missions such as the transport of artillery pieces, this time even in the night hours, "represented one of the most important developments in land warfare in centuries" (Carlucci, 2015, p. 18). The helicopter proved to be the most effective element of battlefield surveillance, performing reconnaissance missions. Its maneuverability allowed an unprecedented level of closeness to the ground and observation of the terrain (Vigo, 2005), providing more and better data for mission planning, as well as improving the tactical guidance of troops on the ground.

With the U.S. involvement in Vietnam, the U.S. Government gave Army aviation development a major boost. In 1962, Secretary of Defense Robert McNamara authorized significant budgetary support for aircraft acquisition, especially helicopters. He also issued instructions related to the evolution of Army doctrine regarding air mobility. "Many of the Army leaders were too tradition-bound. McNamara wanted to push them to make great strides in tactical mobility and air combat capabilities" (Rottman, 2007, p. 20, author translation). Serving as an officer in the U.S. Army during World War II, Robert McNamara directed and promoted the U.S. Aviation Branch strengthening, especially introducing the tactical mobility doctrinal concepts that would be applied in airmobile units' organization and operations. The Airborne Division (air assault) creation and its ability to airlift one-third of its combat units in a single movement with organic helicopters stands out among them (Rottman, 2007). The armed helicopter was also tested for escort, security, and fire support missions within the framework of this confrontation. It proved to be a vitally important resource for the troops' maneuvering, who now had the effectiveness of artillery fire directly supporting their organic units and reducing the possibility of fratricide, given the proximity to the ground, which allowed them to identify enemy targets clearly.

Therefore, despite the historical records' unfavorable U.S. outcome in this confrontation –connotations not customary to the U.S. military– the helicopters' participation marked the outset of the units' tactical air mobility doctrine in unfamiliar and inaccessible battlefields in fragmented and jungle areas, reaching positions that would have been unattainable with other transport means (Tovar, 2018). Here, these aircraft



proved to be the most suitable to accompany the troops' maneuvers. In the following years, many armies worldwide incorporated rotary-wing aircraft to meet the organic needs of mobility and secure and escort the troops themselves.

## **Tactical air mobility: a lesson learned by the Colombian Army from the Korean War**

The Colombian Army's first experience receiving tactical air support from helicopters was during the Korean War. During this confrontation, President Laureano Gómez authorized sending troops from the Colombia Battalion in 1951 (Atehortúa, 2017), where they remained until 1954. It is worth pointing out the influence that its U.S. counterpart had on the Colombian Army during this tactical unit's deployment in Korea, notably, the planning and execution of counterinsurgency operations in air support, evacuations, and supply transport employing rotary-wing aircraft, even at night. The previous resulted in the bolstering of the Colombian Army troops' confidence and morale in the combat field (Schroeder, 2009). This experience also allowed the Colombian Army to project using these tactical air support techniques in the immediate future. Despite the limitations of a reduced aircraft acquisition budget, the U.S. Government's evident support (Atehortúa, 2011) validated Colombia as an ally in the anti-communist struggle in the region, in a Cold War context, just evolving after World War II.

Around the same time, the Colombian Air Force (FAC in Spanish) received the first rotary-wing aircraft. In 1953, the National Government acquired five Bell OH-13 *Sioux* helicopters for the FAC, added to two Hiller OH-12B *Raven* aircraft that arrived a year earlier. The OH-12Bs were initially under the Ministry of Public Works' control (Forero, 1981); eventually, they were placed in the service of the military institution. The helicopters were used for observation missions over specific critical sectors in the vicinity of the Palanquero airbase; soon after, they were transferred to the new base in Melgar (Villalobos, 1993). These models could only carry the pilot and an additional passenger on board; they lacked the capacity to transport armed and equipped passengers, thus failing to directly impact the troops' mobility.

During the 50s and early 60s, the growing rates of public disorder were becoming visible in Colombia. The Military High Command developed a series of measures to combat the violence-generating agents in rural and remote areas. One of these measures was the *Plan de Operaciones Lazo* (Lazo Operations Plan), signed in April 1962 by Major General Alberto Ruiz Novoa, commander of the Army. It sought to carry out

military actions against criminal groups using the State's public force's entire structure (EJC, 1962). *Plan Lazo* was intended to be executed mainly through the use of infantry troops and tracking elements or location equipment, something innovative at the time in the National Army, constituting the first doctrinal concepts of special forces in counter-guerrilla missions. The operation's proposed objectives began to emphasize the need for mobility and speed in the units' ground maneuvers. For the first time, the participation of rotary-wing aircraft was considered the most suitable means for the tactical transport of personnel, supplies, and equipment to execute operations against guerrilla groups (EJC, 1962).

A high degree of mobility was seen as an essential aspect for the success of the operations; however, *Plan Lazo* exposed the limitations in this regard. At the time, the Air Force had a total of twenty helicopters of different types; only five of them were in service, given maintenance and spare parts issues. This reality contrasted with the growing need for tactical air support to provide the mobility the Army required, particularly given the increased deployment of troops for operations against guerrilla structures in mountainous and jungle regions of the national geography. After Colombia Battalion's return from Korea, the Colombian Army was undergoing a transformation process, which was clearly influenced by the U.S. Army, assumed as a model to follow. In February 1962, a U.S. Army Special Warfare Center at Fort Bragg commission, on an official visit to Colombia, issued a concept paper recommending, among other things, the use of helicopters in counterinsurgency tasks, increased troop mobility, improved reaction capabilities, and night operations (Vega, 2015).

By 1964, when an air assault mission was conducted over the site known as Marquetalia during *Operación Soberanía* (Operation Sovereignty), the FAC already had helicopters such as the HH-43B *Huskie* and the UH-1 *Iroquois* (Forero, 1981). These aircraft could transport between five and eight armed and equipped soldiers. Thus, for the first time in Colombia, an aerial landing of troops was carried out using six rotary-wing aircraft (Villalobos, 1993) in an unstaged area for the Colombia Battalion units to launch a tactical ground plan. However, these maneuvers were exceptions, given this aerial means' scarcity and their limitations to operate in the rugged Colombian topography.

In general terms, troop mobility during the 60s, 70s, and 80s continued to depend on land transportation to position the units in advantageous locations, from where they could initiate movements on foot. This method increased the risk of being detected by the increasingly strengthened guerrilla structures during the movement of vehicles. Upon deployment in the areas of responsibility, the troops' mobility was also limited

by the need to resupply periodically. This requirement was normally met by vehicles that transported food to a certain point, depending on the reach of the scarce existing secondary and tertiary roads, where the troops picked it up to continue with their tactical ground plan. Eventually, the lack of land routes compelled the FAC airplanes to drop the supplies to be picked up by the ground troops using the parachute loading technique (EJC, 1962). However, the fall caused damage to the cargo.

The Colombian Army's counterinsurgency attack did not show much impact at the strategic level during those years. The few results were limited to specific events in which some guerrillas were killed. In contrast, the guerrilla structures, especially the Revolutionary Armed Forces of Colombia (FARC in Spanish), were clearly strengthening and growing at an accelerated pace, driven, among other factors, by drug trafficking business income (Vélez, 2001) and illicit economy, which boomed in the 1980s (Bushnell, 2007).

Since the Eighth Conference held by the FARC in 1993, this guerrilla group has changed the way it fights based on a clear intention to form strong structures capable of launching forceful attacks on military units (Pizarro, 2006). These actions acquired a high strategic value within their overall plan to evolve from guerrilla warfare to a new phase of the war of movements. This FARC intention was evident in the repeated guerrilla actions perpetrated against isolated security forces troops. According to the National Center for Historical Memory's (CNMH in Spanish) report, *Tomas y ataques guerrilleros (1965-2013 Guerrilla takeovers and attacks)*, these actions were intensified during the last five years of the last century in an apparent FARC attempt to balance its forces (CNMH, 2016).

The FARC doubled its fronts as of 1982, fulfilling what was planned in its VII conference, and from 1996, after its VIII national conference, it managed to have a force capable of confronting the Army and inflicting strategic blows on it. Attacks such as Puerres, Las Delicias, Patascoy, El Billar, La Carpa, San Juanito, Miraflores, and Mitú, among others, left 355 soldiers dead and 300 kidnapped, forcing the Armed Forces to think about restructuring. (Centro de Estudios Históricos del Ejército [CEHEJ], 2015, p. 26)

For Rangel (1999), the State had no choice but to counter the armed confrontation proposed by the guerrillas. However, under the existing tactical mobility conditions, the Colombian Army troops were far from achieving notable results in controlling the delicate public order situation experienced in those years. Takeovers and attacks on military units were increasingly frequent; soldiers were killed, kidnapped, and wounded without the Army's ability to react in a swift and timely manner.

By the late 1980s, the FAC had acquired aircraft with greater capacity to support the Army's requirements (Tovar, 2020). They included eight American UH-60A *Black Hawk* helicopters, some configured as attack aircraft (harpies) and others for troop transport (hawks). However, neither the amount of equipment nor the FAC's primary mission allowed permanent and adequate support for the troops' tactical requirements. At the same time, an air detachment was being formed within the Army, which, despite already having some small fixed-wing aircraft by the mid-1990s, did not solve the Army's organic mobility needs.

In Pécaut's (2015) terms, the Army seemed to be in a constant defensive position. The previous was easily confirmed by the constant setbacks suffered by isolated troops lacking mobility and the lack of capacity to react to guerrilla incursions into the country. The Colombian armed conflict was most acute during the last five years of the last century (CNMH, 2016). Authors such as Dávila et al. (2000) described the Colombian Army process' during President Ernesto Samper's (1994-1998) mandate as essentially critical due to the major military setbacks suffered during those years: "These strikes also highlighted the weakness of the recently created Mobile Brigades, which lacked mobility" (Dávila et al., 2000, p. 158).

## **Army Aviation and its impact on the Army's tactical mobility as of 1997**

With the reactivation of the Army Aviation Branch, promoted on August 25, 1995, with Decree 1422 (Presidencia de la República, 1995), the Force was given a boost to materialize the project for purchasing new aircraft. This project, called *Adquisición Equipo Aeronáutico del Ejército* (Acquisition of Army Aeronautical Equipment) (Departamento Nacional de Planeación [DNP], 1996), was part of a program led by the Ministry of National Defense to improve technical capacity for the efficient use of resources. The project included two subprograms called *Soporte Operacional* (Operational Support) and *Movilidad de Fuerzas* (Force Mobility) (DNP, 1995). With these, the Ministry expected to face the disturbing existing reality by the end of 1995. The purpose of the subprograms was stated in the following terms:

They seek to improve the Armed Forces' reaction capacity on land, river, and air areas, expanding the transportation infrastructure in each of the Forces to reduce the reaction time between the moment when a disturbance of public order occurs in any locality of the national territory and the presence of the Armed Forces while minimizing the risk of ambushes [...]. Of particular relevance is the creation and

activation of the Army's air detachment, composed of a fleet of helicopters [that were just about to be acquired] which should allow immediate support to forces on the ground, both for the transport of men and supplies, as well as for the reinforcement of offensive capabilities and the emergency evacuation of wounded personnel. (DNP, 1995, p. 15)

This text shows a marked need for Army air mobility to overcome the country's difficult mountainous and jungle topography (Álvarez, 2015). This need was later embodied in the Permanent Directive 000164, signed by General Mario Galán Rodríguez, Army Commander, in 1997. It contemplated the "urgent need to increase the Army's operational capability [...], [as well as] to increase its operational capacity, facilitating command action and increasing its mobility and flexibility through the provision of air support" (EJC, 1997, p. 3). Finally, in 1997, the first helicopters acquired by the Army arrived. The fleet consisted of seven U.S.-made UH-60L aircraft and ten Russian-made MI-17-1Vs, placed in charge of the recently formed Aviation Brigade.

The arrival of helicopters in the Army in 1997 was planned to strengthen the Force's mobility and maneuverability (División de Aviación Asalto Aéreo [DAVAA], 2018). However, these aircraft's entry into operation was not immediate; with their arrival, a significant crew preparation process began, taking a little over a year (Tovar, 2020). The first results were obtained at the end of 1998, with the assignment of the first Army Aviation personnel-operated helicopters in support of the Military's units. One of the first requests in which the Army helicopters were able to react swiftly was in November 1998, when structures of the FARC's Eastern Bloc took Mitú, the capital of the department of Vaupés. By this time, the Army's mobility and reaction capability were only experiencing the benefits of organically having a few helicopters, still too few to satisfy the urgent need. However, with the FAC's support, two UH-60L Army helicopters, with crews that were just acquiring flight experience for this type of operation, managed to participate in *Operación Vuelo de Ángel* (Operation Angel's Flight). Only one day after the guerrilla takeover, they were able to reestablish the complicated public order situation in the remote town, despite the serious toll of deaths, injuries, and kidnappings of the security forces by the guerrillas.

For security and defense analysts such as Arbeláez (2006), this episode marked a turning point in military doctrine. The Armed Forces abandoned the defensive and static attitude they had had, until then, to assume an offensive and dynamic position. Undoubtedly, this change was brought about by the possibility of having rotary-wing aircraft within the Army, which projected an incipient and forming capacity of tactical

air mobility to be integrated to the troops in the battlefield's maneuvers as part of the concept of combined arms.

As mentioned, the tactical air mobility capability was still far from complete. Therefore, during the first half of 1999, the National Government approved a second budget to acquire aeronautical equipment for the Army. According to the Conpes 3039 document, this project sought to "provide mobility in the fulfillment of missions, increasing the capacity and decreasing the reaction time on the target" (DNP, 1999), thus manifesting the interest in providing the Army with helicopters as a tool to guarantee the effectiveness of its strategic counterinsurgency plans. This new budget allowed the purchase of seven UH-60Ls and five MI-17-1Vs, in addition to those previously acquired in 1997.

For the Military Forces' command, headed by General Fernando Tapias Stahelin, it was essential to implement a program to "increase to the maximum the mobility and flexibility of military maneuvers, the speed to react to FARC actions, and the skill in night combat" (CEHEJ, 2015, p. 29). This need led General Jorge Enrique Mora Rangel, commander of the Army between 1998 and 2002, to implement a restructuring and professionalization plan in which new units were activated, for example, the Rapid Deployment Force (FUDRA in Spanish). At the time, this special unit, activated at the end of 1999, was formed by the Army's three Mobile Brigades and the Special Forces Brigade (Casilimas, 2014). Its main mission was its deployment from the Military Fort of Tolomaida to anywhere in the country that public order was disturbed by guerrilla actions. Here, the participation of Army Aviation helicopters was fundamental to provide the troops' mobility and reaction capacity.

In the long run, one event in 1999 marked great success for the purpose of providing the Army with tactical air mobility: the binational agreement between the governments of Colombia and the U.S. called "*Plan Colombia: Plan para la Paz, Prosperidad y el Fortalecimiento del Estado*" (Plan for Peace, Prosperity, and the Strengthening of the State) (Jones, 2006, p. 61). This bilateral agreement contemplated a series of complementary actions aligned with the general anti-drug strategy. One of these actions stated the interest in increasing the Army's mobility for jungle operations (United States Institute of Peace [USIP], 2000). To this end, a total of 16 UH-60Ls, 33 UH-1Ns, and 30 UH-1H IIs were assigned to Army Aviation from late 1999 to early 2005 (Ramsey, 2008). Initially, these aircraft were used exclusively for anti-drug trafficking operations by the brigade created for this purpose in 2000. However, as of 2002, its application was extended for counterinsurgency purposes under President Bush's mandate (Ballén, 2008) as part of its anti-terrorism policy following the events of September 11, 2001.

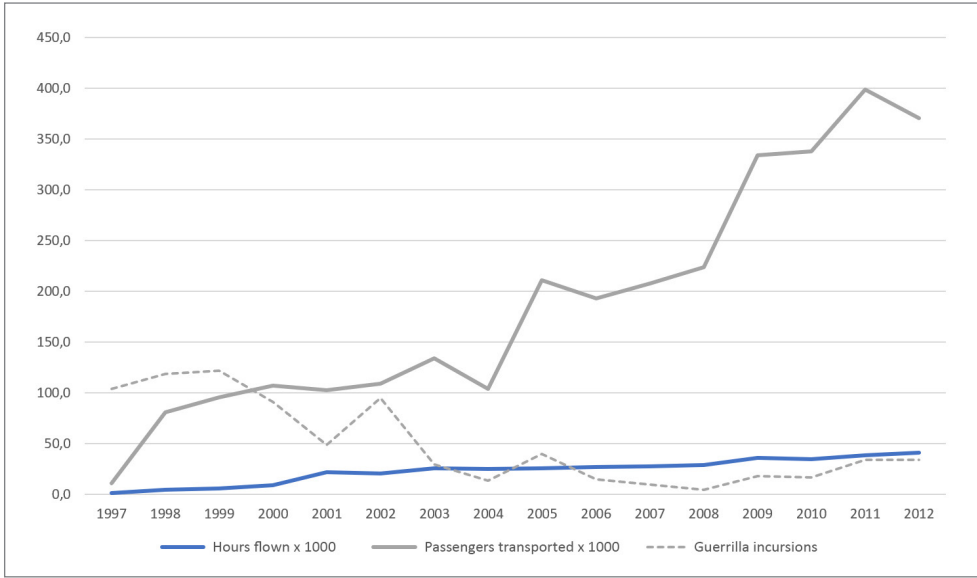
Thus, from 2002, in an unprecedented offensive against the FARC, the Colombian Army implemented plans of great magnitude, with ambitious strategic objectives, after the negative results of the peace talks led by President Andrés Pastrana. In February of that year, operation *Todo Honor* (TH; All Honor) was carried out, retaking the zone of détente with the participation of at least 5,000 soldiers (Centro de Investigación en Conflicto y Memoria Histórica Militar [CICMHM], 2016). Indeed, the helicopters' participation was essential in locating FUDRA troops and Fourth Division units through aerial assault missions in the vast jungle area covering 42,000 square kilometers and corresponding to five municipalities in the departments of Caquetá and Meta (CEHEJ, 2015).

However, beyond making the insertion of troops possible to initiate the tactical ground plan, the helicopters' true importance was in sustaining the operation through constant air missions to supply the feeding units. This supply gave continuity and depth to the tactical missions, carried out since February 2002 and extended until the end of 2003 with the start of *Plan Patriota* (Patriot Plan) and the creation of the *Fuerza de Tarea Omega* (Task Force Omega). This new unit integrated more than 17,000 soldiers to cover an area that eventually surpassed the former zone of détente (about 80,000 square kilometers); its responsibility was executing operations against the FARC in its strategic rearguard zone in the south of the country (CEHEJ, 2015). General Reinaldo Castellanos, the first commander of this new unit, had in special consideration the need for helicopter support to guarantee the fulfillment of the proposed objectives:

Fifty percent of the success depended on the air support, so much so that the troops, without helicopters, could do nothing. In the case of the Air Force, its job was to provide security with airplanes and helicopter gunships, but the Army Aviation had to guarantee the movement and mobility of the 17,500 men that made up Omega. (Bedoya, 2008, p. 32)

For security and defense analysts such as Ortiz (2003), one of the critical factors that halted the escalation of terrorist actions perpetrated by the FARC, which reached its highest peak at the end of the last century (Figure 1), was the great potential for transporting Army troops by helicopter. This possibility resulted in a marked improvement in mobility and gave the high command “the ability to project devastating force in any region of the country” (Ortiz, 2003, pp. 21-22). Figure 1 shows an inverse-ly proportional relationship between the increase in the Army's mobility —reflected in the increase in hours flown by rotary-wing aircraft and the number of passengers carried annually on these same aircraft— and the guerrilla incursions' gradual reduc-

tion between 1997 when the first Army helicopters arrived, and 2012, when the *Plan Colombia* aircraft nationalization process ended.



**Figure 1.** Increase in Army air mobility versus decrease in guerrilla incursions in Colombia between 1997 and 2012.

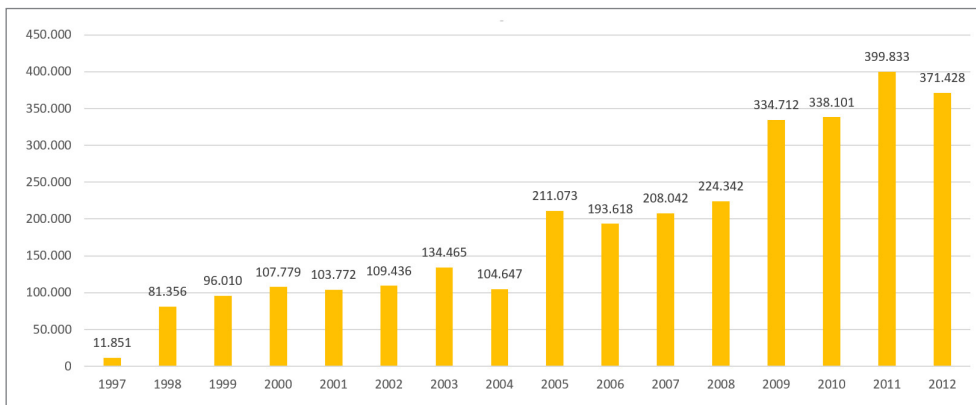
Source: Created by the authors with data from the 25th Aviation Brigade and the CNMH (2016).

With the increase of rotary-wing aircraft in the Army, along with the aircrews' experience gained since 1999 in the use of night-vision goggles and the ability to execute special and day or night air assault missions, as well as the doctrinal foundation of the Aviation branch in the implementation of *Plan Colombia*, the high command was able to design new military strategies, such as the *Plan Patriota* and the *Plan Espada de Honor* (Sword of Honor Plan), among others. The Army units' mobility was essential, considering the area of operation's difficulty and extension where the campaigns were carried out. In this sense, since the first decade of the 2000s, the utility helicopters used in personnel transport, especially the UH-60 and MI-17, allowed the rapid mobilization of large numbers of troops necessary to execute the military operations planned by the Army. A clear example is *Operación Magenta*, carried out in March 2009 and achieved in only three days. Twenty-eight Army helicopters carried out an air assault mission to insert 3600 men, comprising the three mobile brigades of the Joint Task Force for Decisive Action (FUCAD in Spanish) in the jungle area between the municipalities of Vistahermosa and Puerto Rico, Meta (Tovar, 2018).



In 2007, a process began to nationalize the helicopters that arrived, since 1999, as part of *Plan Colombia*. It ended five years later with the assignment of the 15 UH-60L, 16 UH-1N, and 23 UH-1H II to the Army (Tovar, 2020). For years, these helicopters had been performing missions mainly supporting the fight against drug trafficking under the control of the Army Aviation division. As of 2007, these helicopters participated more directly in missions that further strengthened the troops' mobility, gradually enhancing military operations' capacity for reaction and execution until 2012, when their transfer to the Army was definitively completed.

In the period covered by this research, Army helicopters carried a total of 3,030,465 passengers (Figure 2), which represents the transportation of the entire Force 15 times. In 2012, Army mobility increased 31 times compared to the first year analyzed (1997), accounting for the increase in troop mobility and a respective increase in the execution of aviation missions in direct support of ground operations.



**Figure 2.** Army rotary-wing aircraft passenger transportation between 1997 and 2012.  
Source: Created by the authors with data from the 25th Aviation Brigade.

Regarding the Army's achievements in mobility after the significant increase in the helicopter fleet, Casilimas (2014) expressed the following:

The Army Aviation Division had a decisive impact on the development of the conflict in favor of the Colombian State through aerial mobility because, with this capability, the troops were given the possibility of reaching any place throughout the national territory, no matter how far away it might be. It gave access capacity, capacity to sustain operations, as well as high mobility and flexibility to military operations, allowing and increasing the Government's capacity for territorial control. (p. 164)

## Discussion and conclusions

An analysis of the validity of the military command and the high government's decision to acquire the fleet of helicopters for the Army implies a discussion that may have several positions on different aspects. Some positions focus on the necessity or not of the significant defense expenditure made by governments such as Pastrana and Uribe, taking into account that there was already an Air Force with helicopters. It can even be discussed whether these means should have been placed in charge of the FAC.

Authors such as Esquivel (2016) highlight the importance of the role played by FAC aircraft in the confrontation with illegal armed groups, a role that was linked to the fighter aircraft's mission to carry out decisive and precision bombing raids against high-level guerrilla ringleaders. In this regard, it is worth mentioning that the FAC has had fighter aircraft for years and had previously carried out this type of mission without directly impacting the Army's tactical mobility. The first helicopters in Colombia with a significant passenger and cargo transport capacity were the UH-60A, which arrived at the FAC in 1988. After a couple of years of training their crews, these aircraft began to provide some support to the Army's requirements. However, it was limited because of the small quantity of aircraft acquired and, on other occasions, requirement processing delays, given that the aircraft belonged to another Force. Between 1994 and 1998, the limitations to meet the Army units' logistical needs became evident. The Army's manpower had increased significantly since 1987 to the point of exceeding the average figure in Latin America; this made the panorama for operations development even more complicated:

The rations covered 10% of the needs and field equipment 44%. Due to the dispersion of operations in the national territory, the mobility problem had been perceived as critical. It was estimated that ground transportation only covered 33% of the requirements, and there were vehicle maintenance problems, ammunition, and armament deficits. (Dávila et al., 2000, p. 167)

In this sense, it can be concluded that the FAC did not have enough helicopters to cover the Army's tactical mobility requirements. In 1998, in Operation Angel Flight, which retook control of Mitú, the FAC participated with two UH-60 transport helicopters and two armed UH-60 Arpia helicopters (Santos, 2019). Two additional Army Aviation UH-60s were added to complement this aerial assault mission (Tovar, 2018) with troops from the 3rd Mobile Brigade. With the increase of helicopters in the Army in the late 1990s and early 2000s, troop transport and supply requirements were almost entirely covered by the Army's organic aircraft.

This new capacity made it possible to meet the unit relays in the operating device established in the operations, rest, and training cycles (known as the CODE cycle in Spanish), providing greater dynamism and a positive effect on the units' morale and wellbeing. However, the FAC's support continued, especially with the escort provided by the UH-60 Arpía. Thanks to its significant firepower, it complemented the security mission carried out by the UH-1N and UH-1H II helicopters Army fighters in air movement requirements, evacuations, air assaults, and special missions performed daily in all corners of the country. By 2012, once the nationalization process of the *Plan Colombia* helicopters was completed and they were definitively placed in charge of the Army, this Force achieved the largest rotary-wing aircraft fleet in the country and Central and South America (DAVAA, 2018).

Air mobility allowed the Army to have its troops at the required location on the combat field to ensure the success of the ground maneuvers from the very beginning. This event in Colombia was made possible by the arrival of helicopters and the implementation of a combined arms doctrine in which aviation explored a fundamental capability for the counterinsurgency combat effort. In terms of the Army's DAVAA, tactical mobility as a strategic capability is defined as follows:

Tactical mobility in the National Army is undoubtedly its most invaluable resource in the theater of operations; as a decisive combat element, it provides a strategic advantage in the face of various threats by enabling the tactical mobility of surface troops in a timely and permanent manner, operating as a land power element that extends the area of operations in space and time at each level, under the principles of initiative, agility, depth, synchronization, and versatility. (DAVAA, 2018, p. 11)

In effect, the Army's tactical air mobility became the strategic response to an urgent need, thanks to which it was able to react to the difficult public order situation at the end of the last century, which definitively turned the balance in favor of the State.

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