



Attack Helicopters: Key Enablers for Peace Enforcement and the Protection of Civilians

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In the twenty-first century, the multidimensional peace operations of the United Nations have been mandated to protect civilians under imminent threat of attack, with the usual caveat of "within mission capabilities and areas of deployment." Too often, however, UN operations do not have sufficient capabilities to respond to threats and impending attacks. In particular, stopping an attack that is imminent or underway requires robust forces and special equipment, as well as a means for rapid transit and precise movement. In theory, air power provides such capacities but it is under-used and under-evaluated, especially systems like attack helicopters. This chapter presents a case study from the mission in the Central African Republic to highlight the actual use of attack helicopters. In 2017, these UN helicopters from Senegal stopped armed attacks on Bambari and, in an impartial manner, helped defuse a threatening situation within the town. The chapter demonstrates how attack helicopters have proven very useful, while also identifying key shortcomings and

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pitfalls. It draws upon interviews with UN leaders and field visits, in addition to UN documents and the academic/practitioner literature. This case shows how air power can help future UN peace operations apply force effectively to achieve the appropriate balance between peacekeeping and peace enforcement for the protection of civilians.

Introduction: Learning from Failure

The idea of "attack helicopters for peace" may seem oxymoronic, or at least incongruous with the idea of peacekeeping, but these advanced weapons systems have become an important part of modern UN peace operations. Attack helicopters have been used in this century for protection and for peace enforcement in Côte d'Ivoire, the Democratic Republic of the Congo (D.R. Congo), the Darfur region of Sudan, and in Mali. By contrast, during the traditional peacekeeping operations of the Cold War, attack helicopters were never used, and force was rarely applied by any means. To begin to understand why such fearsome weapons systems came to be a part of the "arsenal of peace" in the twenty-first century and how they can be better used in the future, one must look at the troubled past of peacekeeping after the Cold War, particularly in the mid-1990s.

In Bosnia and Croatia, peacekeepers in the United Nations Protection Force (UNPROFOR, 1992–1995) were attacked with impunity, and the lightly-armed UN personnel had little capability even for self-defence.² Observation posts came under fire and were stormed as peacekeepers could do little but duck into bunkers or surrender their positions or even let themselves be taken hostage. More ominously, several areas in Bosnia that had been declared UN "Protected Areas" were overrun with

¹ Armed force was first used by UN peacekeepers serving in the UN Emergency Force (UNEF) when Norwegian soldiers returned fire after Egyptian forces opened fire and threw hand grenades at them in Port Said on 14 December 1956. Findlay (2002, p. 27).

² At times, the local population saw that UNPROFOR was much more concerned about protecting itself rather than the locals, so they dubbed the mission "UNSPROFOR" for UN Self-Protection Force (Findlay 2002, p. 230). There were times when UNPROFOR did use force, including a Canadian unit against Croats committing ethnic cleansing in the Medak Pocket (Off 2004). In Rwanda, locals critiqued the UN mission by distorting its French acronym "MINUAR" to "MINUA," apparently meaning "moving the mouth" in the Kinyarwanda language, saying that "UNAMIR talked big, but didn't act" (Dorn et al. 2000). Later, in Haiti in 2004 to 2007, the United Nations Stabilization Mission in Haiti (MINUSTAH) became known as "TOURISTAH," because its forces were perceived to be acting more as tourists than protectors.

no resistance. In the Srebrenica protected area, in particular, the peacekeepers vacated under coercion before Bosnian Serb forces slaughtered more than 7,000 Bosniak men and boys from 12 to 22 July 1995. In the capital Sarajevo, UNPROFOR peacekeepers felt helpless as Serb forces in the hills above rained fire with impunity on their positions. "Sniper Alley" in Sarajevo became a deadly symbol of the UN impotence in the face of brute force against peacekeepers and civilians alike. It was only when NATO aerial firepower was forcefully applied in August and September 1995 that the Serb forces withdrew from Sarajevo, and their leaders finally negotiated in earnest. The December 1995 Dayton Peace Agreement succeeded where many previous peace accords had failed. They were backed not by weak UN peacekeepers but by much more robust forces from NATO's first peace support operation, the Implementation Force (IFOR), renamed a year later as the Stabilization Force (SFOR). The NATO-led forces used advanced technology, including aerial combat power and night vision, to enforce the peace agreement with the show of overwhelming force against the formerly conflicting forces.

Meanwhile in Rwanda in 1994, the United Nations Assistance Mission for Rwanda (UNAMIR) and its force commander, Major-General Roméo Dallaire, were far from able or even authorized to enforce the Arusha peace agreement. Rather they watched in horror as a genocide, which began in the capital Kigali, claimed some 800,000 lives, almost entirely Tutsis and moderate Hutus, in just 100 days. With little capacity even for intelligence-gathering and robust enforcement, Dallaire felt "deaf and blind" in the field and helpless to save lives. However, his courageous peacekeepers did continue patrols and gave safe-haven to some, saving over 20,000 from slaughter. Still, the peacekeepers suffered psychological trauma, which was compounded by their inability to act with force.

In the early years of the new century, the United Nations also struggled with mass atrocities. However, lessons had been learned from its "baptism by fire" in the challenging missions of the mid-1990s, and from examples of robust peace support operations by NATO in Bosnia.³ The United Nations also benefited from a crucial study chaired by Lakhdar Brahimi

³ The NATO operations in Bosnia—Implementation Force (IFOR 1995–1996) and Stabilization Force (SFOR 1996–2004)—utilized a strategy of projecting overwhelming force and information dominance. Attack helicopters played a key role, including Apache, Cobra, and Kiowa helicopters from the United States. The NATO-led force in Kosovo (KFOR 1999–) also employed Apache attack helicopters.

in 2000. The Brahimi Report encouraged the world organization to give its forces the capability for self-defence, defence of the peace process, and protection of civilians (POC). Particularly after Security Council Resolution 1265 (1999) on the Protection of Civilians, which was spearheaded by Canada, all multidimensional UN missions included a POC mandate.⁴ With these extremely ambitious mandates, it was incumbent upon the United Nations to increase the capacity of UN forces to deter and respond to atrocities against civilians.

In addition to protecting civilians, peace operations must also protect the peace process. Using force for either goal can be considered peace enforcement. One practical definition of peace enforcement is the use of armed force against a party violating a peace agreement or fundamental human rights, while still seeking the party's participation in a peace process.⁵ Force is usually applied after a party has repeatedly committed grave atrocities, the UN warnings have gone unheeded, and the likelihood of further atrocities is high. To carry out peace enforcement, a UN peace operation needs both the will and the means to act in a coordinated fashion, usually with joint air and ground forces.

The United Nations turned to the attack helicopter (AH) as one of the most robust tools for peace enforcement.⁶ Attack helicopters are

⁴ Multidimensional missions differ from traditional (Cold War) missions in that they include mandates for activities well beyond military functions. They include human rights work, nation-building, security sector reform, etc.

⁵ This definition of peace enforcement is suggested by the author. Other definitions include: "A peace support effort designed to end hostilities through the application of a range of coercive measures, including the use of military force" (NATO 2017); and "Coercive action undertaken with the authorization of the United Nations Security Council to maintain or restore international peace and security in situations where the Security Council has determined the existence of a threat to the peace, breach of the peace or act of aggression" (United Nations 2008). The UN definition does not sufficiently distinguish peace enforcement done during a peace operation and "enforcement" done by coalitions (e.g. in Korea 1950, Gulf War 1991, and Libya 2011).

⁶ Attack helicopters, including the Cobra AH-1, were deployed by the United States in 1993 to assist the UN Mission in Somalia (UNOSOM II) but they were under United States, not UN control. The Black Hawk utility helicopters (UH-60 and MH-60) in the famous "Black Hawk Down" incidents of October 1993 were engaged in ambitious US operations that were not cleared or coordinated with the United Nations mission. Attack helicopters were first deployed by the United Nations in Eastern Slovenia: Mi-24 from Ukraine in the UNTEAS mission in 1996-1997. At the time NATO's Stabilization Force (SFOR) was already using attack helicopters (Apache AH-64 and Kiowa OH-58) in Bosnia.

one of two main types of military helicopters; the other being utility helicopters (UH). UH are used mostly for transport, while AH are specifically designed for deterrence and combat.⁷ The first AH provided to UN missions, and still its mainstay, was based on the Soviet built Mi-24. Seeing the need for a robust show of force in the Balkans after the debacle in Bosnia, the United Nations obtained two Mi-24 units from Ukraine for the mission in Eastern Slavonia (UNTAES 1996–1998).⁸ India deployed the same type of helicopters⁹ to apply armed force in two UN operations: first in the UN mission in Sierra Leone (UNAMSIL) in 2000, where they proved essential during dramatic hostage rescue operations¹⁰; then in the UN mission in the Democratic Republic of Congo (known by its French acronym MONUC) in 2003. In 2007-2008, the helicopters helped stop an imminent attack on Goma. In addition to the application of lethal force, the helicopters were used for observation and troop-carrying (Dorn 2014b, pp. 241-253). The use of Mi-24s in peacekeeping lies in stark contrast to the warfighting origin of the attack helicopter.

During the Cold War, the Soviet Mi-24 helicopter was infamous. Known to NATO under the reporting name "Hind," the Mi-24 was viewed with great concern by the West as a "tank buster." In Africa, the

⁷ Other categories do exist: CH (Cargo Helicopter); HH (Heavy Helicopter); MH (Special Operations Helicopter); OH (Observation Helicopter); RH (Minesweeping Helicopter); SH (Anti-submarine Warfare Helicopter); and TH (Training Helicopter). The term "helicopter gunship" is often used synonymously with attack helicopters but that category also includes less robust helicopters having rockets and/or machine guns. Some helicopters, like the Griffons used by the Canadian Armed Forces in Mali, do not qualify as attack helicopters though they are equipped with machine guns in the doors.

 $^{^8}$ UNTAES stands for United Nations Transitional Administration for Eastern Slavonia, Baranja and Western Sirmium (1996–1998). Ukraine provided two squadrons of Mi-24 for a total of 10 helicopters.

 $^{^9}$ In Sierra Leone and the D.R. Congo, the Indian contingent flew the Mi-35 helicopter, the export versions of the Mi-24 helicopter.

¹⁰ After many embarrassments in 1999–2000, the UN mission in Sierra Leone (UNAMSIL) brought in three Indian attack helicopters. They helped successfully rescue over 200 UN peacekeepers held hostage by the Revolutionary United Front (RUF). The Mi-35 used its rockets and guns to provide fire support for advancing UN columns and Mi-8 transport helicopters and neutralised RUF rebels who had ambushed UNAMSIL forces, engaged them in entrenched positions, carried out dissuading attacks, and prevented RUF reinforcements from arriving. In a separate UK-controlled operation in September 2000, independent British forces used Lynx helicopters to assist a rescue operation of five British soldiers in UNAMSIL who were held by the West Side Boys militia group.

helicopter was an instrument of oppression by African dictators, supplied by their Soviet patrons. The deployment of the Mi-24 in peacekeeping signified a remarkable conversion from a fearsome warfighting machine, typically painted in camouflage colours, to a peacekeeping tool, painted white and with large UN lettering. The aircraft still had a Gatling gun and pylons on stub wings for missiles and rockets, but the purpose, rules of engagement, and mindset governing its use were all very different. Like the use of force in modern peace operations more generally, the story of AH use has hardly been told. 11

This paper starts to tell this story, offering a detailed case of the use of the Mi-35 (export version of the Mi-24) in the Central African Republic (CAR). These Senegalese Mi-35, operating within the UN mission, showed how complex peace enforcement measures could be successfully applied for protection of a civilian population under imminent attack.

ATTACK HELICOPTERS: PROTECTING CIVILIANS IN CENTRAL AFRICA

The United Nations Multidimensional Integrated Stabilization Mission in the Central African Republic (MINUSCA) was created in April 2014 with a POC mandate, primarily to protect civilians in towns threatened with regular attacks by armed groups.

The conflict flared up after a coup d'état in CAR in March 2013, as animosities between different groups intensified, based loosely along religious lines. The Séléka alliance was predominantly Muslim and opposing anti-Balaka forces were predominantly Christian. 12 The Muslim population was forced to flee from almost all areas of the capital, Bangui. Clashes between Séléka groups and anti-Balaka continued throughout the country.

¹¹ The use of force in peace operations is the subject of at least two books. The classic work of Findlay (2002) covers use of force in the twentieth century. Peter Nadin (2018) has edited a volume on the subject, which includes a chapter on protection of civilians in Haiti. For case studies of Mi-35 in MONUC, see Dorn (2014b, pp. 241-253). Mi-35 was also used in the UN mission in Côte d'Ivoire (UNOCI), including to remove President Gbagbo who refused to cede power after losing the 2010 election.

¹² The title "anti-balaka" is slang for "anti-machete," "anti-bullets," or "anti-AK-47," arising from the belief of some of Anti-balaka adherents that the grigris they wore could stop Kalashnikov bullets.

After the dissolution of Séléka in September 2013 by its leader, fighting broke out between constituent groups, now called ex-Séléka. One prominent example was the armed rivalry between two armed groups: Unité pour la Paix en Centrafrique (UPC), and the Front Populaire pour la Renaissance de Centrafrique (FPRC), which was in a coalition with other groups (including anti-Balaka groups, ironically). 13 The UPC and its leader, Ali Darassa, were based in Bambari, capital of the Ouaka prefecture, where groups fought over control of the regional diamond mines. In late 2016 and early 2017, after numerous clashes, the FPRC threatened to attack Bambari. To prevent such an attack, MINUSCA declared a "red-line" around Bambari—not be crossed by attackers—and set up a UN temporary operating base (TOB) in nearby Ippy (see maps in Fig. 1). The United Nations also sponsored high-level talks with the leaders of the two groups to stop human rights violations, enhance POC, and promote peace, while at the same time declaring the UN's determination to use robust measures to prevent attacks against civilians. 14

On 21 January 2017, a UN patrol spotted 150 armed FPRC coalition elements in Mbroutchou, about 35 km West of Bria. The UN mission's regional leaders instructed the FPRC fighters to stop their movement westward towards a UN-declared "red line." One part of the red line was declared on the Bria-Ippy-Bambari axis (Route Nationale 5 & 2), 15 km from Ippy towards Bambari. The deterrence effect of UN forces functioned, and the warning was successful; the fighters turned back.

Contrary to the UN demands, however, on February 10–11, the FPRC moved a larger attack force of about 300 men in a column towards Bambari along the same route. They were armed with automatic weapons (AK-47) and rocket-propelled grenades (RPGs) and were assisted by

¹³ The FPRC formed a coalition with the Mouvement Patriotique pour la Centrafrique (MPC) as well as Le Mouvement des libérateurs centrafricains pour la justice (MLCJ), and RPRC forces. In a general sense, the UPC is also an ex-Séléka group (majority Muslim forces). It split off from FPRC in September 2014. Though they fight each other, they also often fight against anti-Balaka (majority Christina) forces. Human rights violations are committed by all armed groups, though not equally.

¹⁴ "On 25 January, in Bambari, Ouaka prefecture, DSRSG-P Corner met with anti-Balaka and *Unité pour la Paix en Centrafrique* (UPC) leaders to urge the two groups to avoid clashes in the Bambari area and stop abuses against civilians. She reiterated MINUSCA's priority to protect civilians and its robust response, including if red lines are not respected. Lastly, she warned UPC leader Ali Darassa of alleged human rights violations committed by UPC elements near Bambari in recent weeks" (MINUSCA Sage, 2017).

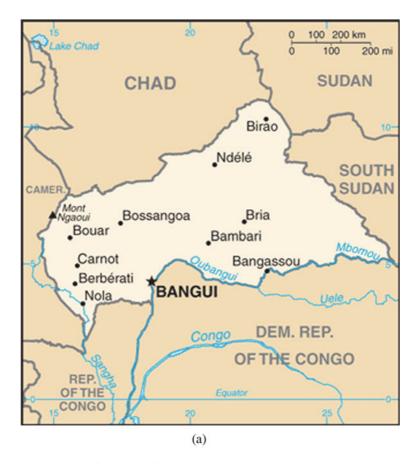


Fig. 1 a. Map of Central African Republic and its major towns and b. close-up of the Bria-Ippy-Bambari axis, with fires used to indicate clashes (*Sources* (A) Wikipedia from CIA [public domain], and (B) drawn from Google Maps)

seven pickup trucks. Their goal was to attack and sack the town of Bambari and remove the UPC leader Darassa. With the crossing of the UN's red line, the UN Force sent a Mi-35 attack helicopter (shown in Fig. 2) on 11 February to a location near the village Ngawa (12 km East of Ippy), where it observed and reported the rebels' movement with the Mi-35's high-zoom cameras in a pod fixed to the front of the aircraft. The pod could take images in both the visible and infra-red parts of

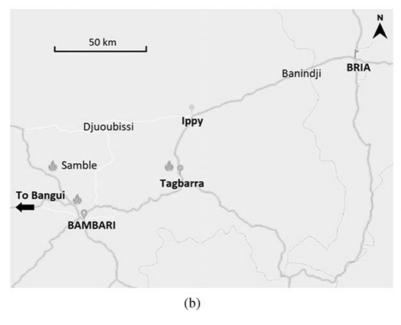


Fig. 1 (continued)

the electromagnetic spectrum with its gyrostabilized cameras. This system achieved positive identification of armed and/or uniformed personnel on the ground and also enabled precise targeting.

The UN Force Commander had already signed a fragmentary order (FRAGO) to allow the Mi-35 to engage with force, with tactical control (TACON) assigned to Joint Task Force Bangui. After firing a warning shot, at 1421 hours, the Mi-35 engaged the armed convoy with rockets and machine-gun fire, destroying four pickup trucks and scattering the rebels into the bush. The rebels may have fired at the helicopter with their semi-automatic rifles, but on return to the UN airbase in Bangui, post-flight checks found no damage to the aircraft.

The UN action had successfully stopped the rebel movement to Bambari and demonstrated deterrence and prevented an imminent attack by using UN force. Most of the rebels retreated to Ippy. There were an unknown number of fatalities from the action; four injured people were brought to the Ippy health centre. UN military observers received



Fig. 2 The Mi-35 Attack Helicopter deployed in MINUSCA by Senegal. The camera pod is at the very front of the aircraft below the abbreviation "UN." Also observable is a slim rocket on one stub wing alongside the larger external fuel tank. The Gatling gun is next to the gunner station, and the pilot sits higher up in the aircraft (*Source MINUSCA*, 2017)

a report that the man leading the FPRC column, "General" Joseph Zoundeko, was killed during the incident.¹⁵

Post-script: Consequence Management with Attack Helicopters

The use of force often has both positive and negative consequences. In this case, on the positive side, a direct threat of military action against a provincial capital was averted. The mission also experienced negative consequences or "blowback" (a term commonly used in the intelligence community). The FPRC leader, Azor Kalite, vehemently condemned the UN attack on his forces, accusing the mission of favouring his enemy, the UPC. When a MINUSCA representative contacted him, he threatened that, if his FPRC forces were not allowed to move on Bambari, they

¹⁵ Information on this case study is from UN staff involved in the use of force, including conversations with the Senegalese Aviation detachment on 27 March 2018, email exchanges subsequently, and documentation from MINUSCA (10 February 2017).

would "target MINUSCA staff, vehicles and NGOs wherever they can." (MINUSCA, 10 February 2017). He also threatened to use anti-aircraft weapons against MINUSCA helicopters and attack UPC members in Bria and other locations. Kalite stipulated, "the only way to prevent further clashes is to remove the UPC leader Ali Darassa from Bambari."

Fearful of violent retaliation from the FPRC, the UN field offices in the region (namely in Bambari, Bria, Kaga Bandoro, Ndélé, and Birao) raised the threat level and took self-protection measures. UN staff and civilians were moved close to safe havens and were restricted from further movement for their own safety. Troops from MINUSCA's Mauritanian Battalion, reinforced by Bangladeshi Special Forces, were tasked to stop any FPRC movement towards Bambari. In the early morning of February 12, the UN force took a blocking position at the Tagbara Bridge (65 km NE of Bambari, see Fig. 1b) to prevent FPRC movements towards Bambari.

In talks with MINUSCA, Kalite had also threatened that "the safety of Fulani [a large ethnic group] civilians cannot be guaranteed" (MINUSCA, 10 February 2017). Some 200 local civilians, particularly from the Fulani ethnicity, moved to the UN's TOB in Ippy, settling in a school building on the premises. As a result, security had to be increased, particularly since the Ippy area was an FPRC stronghold, with about 200 armed elements. MINUSCA built up its position in Ippy to stop future FPRC movement towards Bambari.

The UN mission realized that the continuing presence of UPC leader Ali Darassa in Bambari was a liability. MINUSCA had to act impartially and to be *seen* to be doing so, especially by the FPRC. In coordination with the government of CAR, it requested the Darassa to leave Bambari. He was using the town's population as a de facto human shield against attack, and the United Nations could not permit the possibility of fighting in populated areas. To encourage his departure, it made a strong show of force, surrounding Darassa's house and even positioning the Mi-35 attack helicopter directly above it (Dorn 2019). Rown as Operation Bekpa, the action increased MINUSCA's presence in the town and stabilize the

¹⁶ Dorn, A. Walter. Conversation with MINUSCA Force Commander Lieutenant General Balla Keita, Montreal, 12 June 2019; also United Nations, "Report of the Secretary-General on the Central African Republic," S/2017/473 of 2 June 2017, pp. 3–6.

security situation in case of pro-Darassa demonstrations, which were often fomented by Darassa himself.

The crisis was alleviated when Darassa announced that he would leave Bambari, which actually happened on February 21. Meanwhile, Darassa's Christian and Muslim supporters gave MINUSCA a jointly signed memorandum expressing support for him, declaring that he helped create social cohesion between the Muslim and Christian communities. They were also fearful that Bambari would be less secure following Darassa's departure. A crowd, mostly of women and children, blocked the gates of the UN compound in Bambari in protest against the UN's initiative to force Darassa to depart. UN staff could not leave their offices at the end of the day on February 20 so they stayed through the night. In the morning, local authorities dispersed the crowd, and a UN Formed Police Unit (FPU) escorted UN staff out of the office (MINUSCA 20 February 2017).

The FPRC also had used the crowds to pressure MINUSCA; for example, by calling for demonstrations on 13 February. Fortunately, these were successfully contained by the United Nations. However, tragically, FPRC elements ambushed a UN patrol made up of Mauritanian forces on February 21, wounding four, one severely. During the combat action, the FPRC suffered from the UN's responsive fire: an estimated nine were killed and three were wounded. The United Nations later sent out additional patrols (MINUSCA 21 February 2017). One patrol spotted approximately a thousand FPRC coalition elements moving near Bambari. But no attempt was made to attack the town. Apparently, the FPRC had learned a lesson from the Mi-35 helicopter intervention during the FPRC's earlier failed attempt to reach Bambari.

The United Nations proved capable of using force both to prevent aggression, namely imminent attacks on Bambari, and to support a peace process, when the parties realized that they could not achieve their objectives by force. Indeed, the FPRC and UPC signed a ceasefire agreement on 9 October 2017 in Ippy, though both groups continued to commit human rights violations afterwards. In May 2020, the FPRC leader, Azor Kalite, was arrested by UN forces, after a series of attacks against civilians by his forces and an attempt to rush against the Portuguese Quick Reaction Force, one of MINUSCA's most robust units. He was put on trial before the Special Criminal Court, established to judge mass atrocity crimes in CAR.

Case Conclusions

Despite the blowback, MINUSCA demonstrated in 2017 that it could engage in POC tasks and successfully protect civilians threatened with imminent attack. The conflicting parties learned that a UN-declared "red line" was meaningful and would be enforced by significant force. The world organization was able to back up its declaration with military might, thanks in part to the presence of the Mi-35 attack helicopters provided by Senegal. Not only were these helicopters equipped with effective weapons systems and defensive armour, but they also had advanced surveillance technology enabling day and night intelligence-gathering. 17 Being deployed from Bangui, the Mi-35 had significant freedom of movement over hundreds of square kilometres of the country and easily overcame the natural barriers that ground forces faced, like poor and impassable roads. And armed groups in CAR lacked the sophisticated anti-aircraft capabilities required to pose a significant threat to military helicopters. For the United Nations, the Mi-35 was a key enabling technology for peace enforcement and POC.

Much more sophisticated attack helicopters have been deployed in other missions. In the Congo, South Africa deployed the Rooivalk AH. In Mali, The Netherlands deployed the Apache AH and Germany deployed the Tiger AH. While case studies on their use and utility have not yet been published broadly, the indications are that the Western AH have also proven effective. Unfortunately, both The Netherlands and Germany suffered separate accidents due to mechanical failures and pilot errors: crashes that cost the lives of the two pilots in each of the helicopters. Despite the setbacks, the lessons are clear.

THE UTILITY OF COMBAT AIR POWER

Airborne technology has proven to be a key component of peace enforcement in the twenty-first century. The present case study has shown how air power stopped imminent attacks, as did earlier uses of Mi-35 AH in the D.R. Congo (Dorn 2014b, 2023; Williams 2023). These twenty-first-century cases contrast with the conclusions drawn by Findlay, based

¹⁷ The Mi-35 system has a Controp DSP-1 pod, which contains a high-definition visible light camera and an infra-red (IR) cameras, along with a Laser Range Finder to determine the distance to targeted objects.

on the UN experience in the twentieth century. (Findlay 2002, p. 252) Findlay published his classic work on the use of force in peacekeeping in 2002. He documents very well the UN policies, dilemmas, struggles, and evolving practice on the use of force over the previous half-century. However, his evaluation of combat air power in UN operations has not withstood the test of time. Still, it is worth looking at his critique to identify its flaws and strengths:

- (1) Air power, Findlay states, is "difficult to use directly, discreetly, proportionately, reliably and accurately." The experience with attack helicopters in UN missions has shown the opposite: precision strikes are possible for proportionate responses that utilize reliable and accurate targeting systems aboard the helicopters, even those of developing countries.
- (2) Air power, according to Findlay, "is constrained by too many physical limitations, including the danger of collateral damage to peacekeepers and other innocent parties." Again, the practice in CAR, the Congo and Mali shows that collateral damage can be minimized, if not eliminated. Shooting from the air often allows a degree of precision and peacekeeper-safety that ground forces do not have. Of course, when combined together, air and ground forces are even more effective than either alone.
- (3) That "air strikes are too politically charged to be used routinely" has also been shown to be false. The number of UN missions that have used airstrikes from attack helicopters since Findlay's book (2002) has grown from Sierra Leone to the Congo, Côte d'Ivoire, Darfur, CAR and Mali. However, concerns about collateral damage in urban areas did cause MINUSTAH (2004-2017) to avoid arming their helicopters; so, attack helicopters were not used in Haiti.

Findlay's critiques may be applicable to some fixed-wing aircraft, especially fast-flying jets. But certain jets and turboprops, like the Pilatus PC-9 and Super Tucano EMB314, can arguably detect and target with the same precision of attack helicopters, at less cost and vulnerability. 18 In any case, it is beyond the current capabilities and means of the United Nations to manage and use fast jets in targeting, something only done once (successfully) in UN peacekeeping history (Congo 1961–1963, see Dorn

¹⁸ Comment to the author by Robert Owen, Professor in the Department of Aeronautical Science at Embry-Riddle Aeronautical University, 14 August 2018.

2014a).¹⁹ Findlay does correctly note that NATO airpower "did prove its effectiveness in helping coerce the parties [in Bosnia] to the negotiating table, despite widespread skepticism that it could do so" (Findlay, p. 269).

Aircraft provides many advantages over ground forces. Ground travel is slow and subject to numerous geographic and political constraints. The United Nations can send aircraft to fly more directly at higher speeds and with fewer, if any, obstacles, though usually limited to established airfields and established zones for takeoff and landing. Typical maximum velocities are: vehicle (100 km/hr), helicopter (200 km/hr), and passenger jets (1,000 km/hr). However, air travel has high financial costs (e.g. \$3,000/hour for a helicopter). This is rarely cheaper than ground vehicles. So, the United Nations carefully controls the total number of flying hours, with the responsibility to authorize flights given to a civilian Director of Mission Support rather than the Force Commander (UN 2021).

It is often safer to fly personnel than move by vehicles on dangerous roads through thick forests or jungles, which provide rebels with locations to ambush or halt UN forces. At the same time, it is possible to shoot down aircraft, including attack helicopters, e.g. as demonstrated in wars: in Afghanistan by local forces with surface-to-air missiles against Soviet Mi-24 in the 1980s; with rocket-propelled grenades (RPGs) in Somalia against US Black Hawk helicopters in the early 1990s; and against Mi-24 during the Russian war in Ukraine in 2022. While some UN utility (transport) helicopters have been shot down (e.g. in Angola), no UN attack helicopters have been shot down, though in the Congo, the Mi-35 have received shots to the fuselage. Attack helicopters are strongly armoured against assault rifle fire, the most common type of fire in conflicts where peacekeepers are deployed. Moreover, AH can fly at higher altitudes (e.g. above 1,500 feet) to avoid most small arms fire, including rocket-propelled grenades.

Simply the presence of UN attack helicopters in the vicinity of rebel groups can act as a significant deterrent against attack since rebels feel

¹⁹ The United Nations made good use of jets in the United Nations Operation in the Congo. Ethiopian Sabre jets, Indian Canberra bombers and Swedish J-29s ("flying barrel" bombers) were used effectively to deal with mercenaries and rebel forces in the break-away Katanga province. See Dorn (2014).

vulnerable against air attack.²⁰ Often opposing forces quickly retreat when they see or hear UN attack helicopters approaching (Dorn 2014b, p. 250). Among the benefits of attack helicopters are the ability to provide close air support to ground forces when they are under attack, and provide high-quality intelligence, surveillance, and reconnaissance capabilities (e.g. still and video imagery).

For the United Nations, the challenges or drawbacks of attack helicopters include: their expense (for lease and fuel), heavy maintenance, lack of personnel with the unique skill sets (e.g. pilots and forward air controllers), susceptibility to grounding in poor weather, the difficulty operating in harsh conditions, and vulnerability to attack while on the tarmac (including from indirect mortar fire) as with any aviation assets. Given that they are expensive aircraft and much in demand, only a few AH can be made available to peace operations, certainly not enough for the large areas that must be covered. For this reason, most deployments are limited, and even wealthy G7 nations tend not to keep their attack helicopter units in UN missions for long periods, though the UN pays for a portion of the costs.²¹

The United Nations is chronically short of attack helicopters, as evidenced by the recurrent requests in the quarterly "Uniformed Capability Requirements" document issued quarterly by UN headquarters. There is typically a shortfall of 10 AH in UN peace operations (Novosseloff 2017, p. 4; Sherman et al. 2012). In CAR, DRC and Mali, UN missions frequently faced situations where attack helicopters were required but unavailable. The missions' AH may have been already tasked elsewhere, were undergoing maintenance, or out of range (typically 200 km). When they were available, sometimes they arrived too late

²⁰ The benefit of air power to the UN's Mali mission is demonstrated by the experience of Major General Michael Lollesgaard in Mali, who observed that no ground forces were attacked during his term Force Commander of MINUSMA (2015-2017) when they had air cover. Furthermore, no shots were fired against UN helicopters. (Insight shared with the author, Oslo, 31 August 2018.).

²¹ In Mali, the Netherlands rotated out its Apache attack helicopter unit in 2017 and the German Tiger AH unit that replaced it departed in 2018. The Canadian replacement for the German contribution is not providing an AH capability, just armed utility helicopters (Griffons) for escort of the Canadian Chinook heavy transport aircraft. However, El Salvador has been providing the small Defender (MD-500) multirole helicopter to support Mali. It is equipped with missiles and a machine gun. In D.R. Congo, the Rooivalk AH from South Africa might be in 2018, which would leave only the Mi-24 unit from Ukraine.

to be effective (even travelling at 250 km/hr), and sometimes could not locate well-hidden targets, even with a suite of advanced sensors.

In the United Nations Multidimensional Integrated Stabilization Mission in Mali (MINUSMA) in 2014, The Netherlands contributed four Apache AH-64, which were used to protect towns facing attack. When a town in Northern Mali was being targeted by mortar fire and the attackers did not respond to warnings, the AH fired on them, thus stopping the attack. After an accidental crash in 2015, the Apache contingent withdrew and was replaced by four Germany EC665 Tiger AH. After an accidental crash in 2017, Germany withdrew its German Tiger AH. El Salvador helped fill the void by providing six light AH (MD500E) to the mission (Trevithick 2022). Canada provided machine-gun equipped CH-146 Griffon helicopters during a one-year deployment in 2018–2019 but only used those helicopters to escort and protect the larger CH-47 Chinook heavy-lift helicopters. No shots needed to be fired by the Griffons, possibly because of their deterrent power.

The sensor suites on these helicopters vary from the rather low-resolution night vision devices found on the Senegalese Mi-35 to the very sophisticated IR cameras on the Apache and Tiger AH of the European contributors in the Mali mission.

CONCLUSION: LEARNING FROM SUCCESS

The United Nations and its member states can learn not only from the peacekeeping failures of the 1990s but also from the successes of the 2000s. Unfortunately, the world's media and most scholars tend to focus on the failures and weaknesses of UN operations, which are also proclaimed in media headlines. By contrast, successes are rarely recorded, not to mention analyzed for lessons. This chapter has sought to help balance the record and highlight some of the successes in one of the most challenging and controversial tasks of such operations: peace enforcement. As shown, attack helicopters in CAR proved to be crucial enablers for peace.

Nevertheless, the lessons need to be tempered by a realistic estimate of the degree of air power actually deployed: the United Nations remains underequipped with the aircraft, as evidenced by the continuing call for

them.²² Local populations often complain that the United Nations is not doing enough to protect their communities, especially remote ones. The United Nations has sparingly few attack helicopters and has limits on the amount of technology it can get from its technologically advanced member states, which have much less interest in peacekeeping than in defence and warfighting. The main troop contributing countries (TCCs) are from the global south, with fewer technological resources to offer. However, some developing nations have to be lauded for providing useful AH, like Senegal, Ukraine, and India with their Mi-35s. Furthermore, some technology contributing countries ("TechCCs"), like The Netherlands and Germany, have provided some of the world's most advanced AHs as well as Unmanned Aerial Vehicles (UAVs), so far unarmed. More generally, Western countries can contribute much more equipment, technology, and technical training to make peacekeeping more effective, even as they tend to avoid large-scale deployments of their troops (Dorn 2016).

The optimal level of force in peacekeeping is far less than what is needed in warfighting, but it does not follow that it is none. Though some missions can do without peace enforcement, most modern operations require a measure of force to provide a deterrent effect, incentivize parties to pursue peace further, and provide the force required to repel attacks. In the eternal struggle between power and principle, the side with the moral "right" needs to have the capacity to stop the immoral "might" from committing atrocities with impunity. But for that, UN missions need to be ready to deal with the tactical and strategic consequences, including the possibility of retaliatory attacks on UN forces or civilian personnel, as seen in the Bambari case.

Ideally, UN missions would be adequately equipped and staffed so that they could demonstrate to the conflicting parties the capacity for overwhelming force, demonstrable deterrence, have excellent situational awareness, and act proactively and pre-emptively. This way, they can deter violence and, ironically, through the show of force, reduce the degree of violence that needs to be used in these conflict zones. Finding the appropriate level and type of force can be challenging. Peace enforcement

²² The UN call to its Member States, titled "Current and Emerging Uniformed Capability Requirements for United Nations Peacekeeping" (quarterly), almost always lists attack helicopters as a priority, including the requirements reports issued before Peacekeeping Ministerial.

remains an intellectual challenge of great practical importance. Peaceenabling technologies, especially attack helicopters, will remain crucial tools for robust peace operations.

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