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The Diplomacy of the Jaguar

French Airpower
in Postcolonial African Conflicts

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Wright Flyer Paper No. 39



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Air University Press
Maxwell Air Force Base, Alabama

March 2009

This Wright Flyer Paper and others in the series are available electronically at the Air University Research Web site <http://research.maxwell.af.mil> and the AU Press Web site <http://aupress.au.af.mil>.

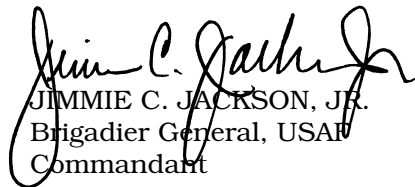
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*In memory of Sgt Gilles Polin (French Army, 1st RPTMa
[Naval Infantry Paratrooper Regiment]), killed in action at
the Chadian-Sudanese border on 3 March 2008.*

Foreword

It is my great pleasure to present another of the *Wright Flyer Papers* series. In this series, the Air Command and Staff College (ACSC) recognizes and publishes our best student research projects from the prior academic year. The ACSC research program encourages our students to move beyond the school's core curriculum in their own professional development and in "advancing air and space power." The series title reflects our desire to perpetuate the pioneering spirit embodied in earlier generations of Airmen. Projects selected for publication combine solid research, innovative thought, and lucid presentation in exploring war at the operational level. With this broad perspective, the *Wright Flyer Papers* engage an eclectic range of doctrinal, technological, organizational, and operational questions. Some of these studies provide new solutions to familiar problems. Others encourage us to leave the familiar behind in pursuing new possibilities. By making these research studies available in the *Wright Flyer Papers*, ACSC hopes to encourage critical examination of the findings and to stimulate further research in these areas.



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Abstract

The legacy of its former status as a colonial power has left France with a strong commitment in Africa. To secure its interests and aspire to a great foreign policy, France has used the cooperation agreements with its former colonies to maintain its influence on the continent, leading the French military to intervene in multiple African crises since decolonization in 1960.

This paper addresses the use of airpower during the French military operations in Africa since 1960. Using case study methodology, it emphasizes the operational level of war and analyzes the use of the different French army, air force, and naval aviation operational roles; the adaptation of equipment to conditions in Africa; and the changes in the French-African policy that have influenced the use of airpower.

The study argues that successes in Mauritania and Chad in the 1970s and 1980s convinced the French military to increase its reliance on airpower. The change in policy following the Rwandan crisis in 1994 did not alter this trend. On the contrary, the synergy between French airpower and special forces was critical in securing France's objectives during operations in the former Zaire in 2003 and the Central African Republic in 2007. However, the ongoing intervention in the Ivory Coast proved that a lack of airpower integration planning can lead to numerous challenges for the French military. To address that issue, the French air force needs to develop an operational doctrine that the joint force commanders can rely on to better integrate the use of airpower with the early stages of joint planning and get the full benefit of its flexibility, responsiveness, and firepower during the operation.

Acknowledgments

I would like to express my gratitude to two individuals at the Air Command and Staff College who were instrumental in the completion of this study. Lt Col Robert Munson provided the initial momentum and guided the first steps of my research. Dr. William Dean supported me with his professional guidance and his knowledge of French military affairs that challenged my French-centric view of the topic.

Introduction

To be tolerable, any use of force in Africa must have an indisputable motive and be strictly limited in time and space, that is, brief and punctual.

—French prime minister Pierre Messmer (1972–74)

Since the end of its colonial empire in the 1960s, France has intervened in many crises in Africa and has maintained a steady number of deployed troops in the countries of its former empire. Public opinion in France and abroad has often identified the French operations with three key and highly publicized figures: the paratrooper from marine infantry or Foreign Legion regiments, the enduring C-160 Transall transport aircraft, and the Jaguar fighter-bomber. These three actors have traditionally drawn most of the media coverage of the operations. The last two are FAF assets and seem to confirm the strong involvement of French airpower in Africa. However, the reality may not be as clear-cut. To support the French-African policy, the military has used airpower in different roles and at different levels of commitment throughout the history of French postcolonial intervention on the continent.

This research paper precisely analyzes how the French military has used airpower during its operations in post-colonial Africa, concentrating on the operational level of war. Drawing from the history of early interventions from the late 1960s to the crisis in Chad in the 1980s and the recent operations in the Democratic Republic of Congo and the Ivory Coast, the study examines the role of airpower in these conflicts. Was airpower a preferred option or did it have only a marginal role? Was its employment successful? What were the challenges it faced? Did the use of airpower help France achieve its strategic goals?

Building on the legacy of successes in Chad in the 1980s and the Congo in 2003, this study argues that French airpower in a joint fight has proven to have a flexible, responsive, and efficient capability to address African crises. Until the recent conflict in the Ivory Coast, the French military had increased its reliance on airpower to reduce its mark on the continent and to act as a force multiplier to support

African military forces. While success in Africa cannot rely solely on airpower, the conflict in the Ivory Coast has shown the necessity of better airpower integration in all its roles to face the unrelenting military challenges on the continent.

This study begins by recalling the historical basis of the French involvement in Africa and the different policies and military strategies that formed airpower employment. It proceeds to address the different French interventions in post-colonial Africa and how airpower rose from a limited role to the preferred option in the showdown with Libya in Chad in the 1980s. The study continues with a discussion about the change in the French-African policy after the Rwandan crisis that led to the successful use of a French equivalent of the Afghan Model. It ends with the challenges faced in the ongoing operation in the Ivory Coast and also with lessons learned and recommendations.

France in Africa: An Aspiration to *Grandeur*

Stemming from the legacy of its former colonial empire (see appendix A), French involvement in Africa has played a leading role in France's foreign policy since the end of the decolonization in the early 1960s. The special status of the French-African policy is twofold. There is the need to protect French economic interests in its former colonies. While highly preponderant in the early years of the postcolonial era, this motivation has lost most of its importance today.¹ The other motivation has not lost any relevance. France has maintained a strong influence in Africa to secure its status as a medium power with an important role in the international community. This aspiration to *grandeur* (greatness) is key to understanding the French-African policy. As John Chipman points out, "The fact that Africa provides a 'field of action' for French power is fundamental to French military and therefore political confidence."²

To keep its influence in Africa, France has relied on the agreements secured by Gen Charles de Gaulle when France granted the colonies their independence in 1960.³ Regarding military affairs, the agreements involve two different kinds of relationship with the former colonial power. The *defense* agreements give African states the possibility to call

on France for direct security assistance, which, for all countries except Togo and Benin, includes the protection of France against internal and external threat. Twelve African states signed them in 1960 and 1961: the Central African Republic (CAR), Chad, Congo, Gabon, Senegal, Madagascar, the Ivory Coast, Benin, Niger, Mauritania, Togo, and Cameroon. The military cooperation agreements involve instructing and training the African military. These agreements comprise “one of the most efficient ways of guaranteeing the maintenance of [French] influence in the new armies.”⁴ Under these agreements, France provides the newly formed African states’ military with free equipment, advising, and training. All former colonies signed them except for Guinea.⁵

**French-African Policy:
From Direct Interventionism to
Renforcement des Capacités Africaines
de Maintien de la Paix (RECAMP)**

Having secured guarantees regarding its interests and strong ties with the newborn African states, France started its military withdrawal from the continent as early as 1961. By 1970 the number of troops on the continent had decreased from 58,500 to 6,400.⁶ Until 1974 this disengagement was only interrupted by a few spectacular interventions, as in 1964 to support the Gabonese president Leon M’ba against an uprising led by the leader of the opposition party and in 1968 to suppress a revolt in northern Chad. Several revisions of the defense agreements further reduced the size of the French military presence, with the withdrawal of French forces from Madagascar.⁷ When Pres. Valéry Giscard d’Estaing took office in 1974, he changed French-African policy to a more interventionist policy targeting a perceived growth in Soviet influence in Africa.⁸ An era of renewed French military interventionism began and remained with some adjustments when François Mitterrand and the Socialist Party came to power in 1981. France kept honoring its defense agreements but put self-imposed restraints regarding military intervention destined to solve purely internal disputes. Still, difficulties started to arise at the beginning of the 1990s regarding such a policy. These difficulties assumed

three aspects: the need to maintain large permanent bases in Africa in a shrinking defense budget environment at the end of the Cold War, the lukewarm support of national public opinion concerning the government's stance on crises in Africa, and the lack of an efficient response to the genocide in Rwanda in 1994. These issues came at a time when African states grew increasingly eager to handle security problems by themselves and caused a major shift in focus of the French military cooperation in Africa. The new French policy that was presented in 1998 during the Africa-France summit at the Louvre in Paris established the Renforcement des Capacités Africaines de Maintien de la Paix (RECAMP) program.⁹ This program centers defense cooperation on reinforcing the African states' peacekeeping capacity. Instead of direct interventionism, France would promote regional solutions through such multinational organizations as the United Nations, the African Union, and the European Union (EU) by providing training and support for African nations willing to participate in peacekeeping operations. The ongoing operation in Darfur offers an aspect of this risk-sharing policy.

The Three Pillars of the French Military Strategy

To support the French-African policy, the French military strategy in Africa has evolved around three pillars. Depending on the policy of the time and the state of its relationships with various key African states, the preponderance of each pillar has varied accordingly.

The first pillar of the French strategy supports the military of its African partners. The initial defense of an African state rests on its own military, equipped, developed, and trained by France. A modified version of this pillar has preeminence today with the RECAMP concept that favors an African response to an African regional crisis. French airpower has adapted to the new policy by supporting African forces with airlift; intelligence, surveillance, and reconnaissance (ISR); and combat aircraft in conjunction with special forces on the ground. Operation in the CAR in spring 2007 provides a good example of this evolution: Special forces provided targeting information for Mirage F-1s flying from N'Djamena to support CAR forces trying to repel Chadian

rebel columns. Throughout the operation, Atlantic maritime patrol aircraft from the French Navy provided ISR.

The second pillar of the French strategy supports French military forces stationed in Africa. These *Forces d'Outre-Mer* (French overseas forces) initially came from the seven principal bases secured by the defense agreements (Dakar, Abidjan, Libreville, N'Djamena, Bangui, Djibouti, and Diego Suarez). Their purpose is to provide a permanent French military presence that can deter and serve as a crisis monitor and a rapid-reaction capability. Renegotiations of the defense agreements, financial cost, and political issues have led to a constant reduction of the number of overseas bases and permanently deployed troops. Today, only Dakar, Abidjan, Libreville, and Djibouti remain. The French strategy rested heavily on this pillar during the first decade following decolonization, when French overseas forces and bases in Africa were still numerous. Since that time this pillar has been more and more buttressed by the third pillar, which has borne the brunt of major operations from the 1970s onward.

This third pillar is the French-based, quick-reaction force that would reinforce pre-positioned forces in case of a serious crisis. Created in 1961, the 23,000-personnel *Force d'Intervention Interarmées* (Joint Intervention Force [JIF]) had a dual purpose. It could provide an effective and deterrent force to face the instability on the continent while allowing the downsizing of French forces permanently stationed there to make them more acceptable to public opinion both at home and abroad. A reorganization of the French military in 1983 led to the creation of the *Force d'Action Rapide*, a quick-reaction unit that absorbed the *Force d'Intervention Interarmées* in a far more lethal force twice its size and capable of action both in central Europe in support of the North Atlantic Treaty Organization (NATO) or in Africa.

Airpower in the Background: The Early Years of French Involvement, 1960–75

In the years after decolonization, France implemented its military strategy in Africa by relying principally on its

ground forces stationed in France and overseas. The role of the French Air Force (FAF) was modest, consisting primarily of supporting the JIF using intertheater airlift to deploy it from France and intratheater airlift to resupply it from French overseas bases. Reconnaissance, air defense, and close air support (CAS) had a far lower priority because the French military did not expect a high level of threat.¹⁰

The capacity to project troops was critical to successfully achieve the French strategy. Unfortunately, the FAF airlift capability proved to be limited. Qualitatively, its most capable asset was the Nord N-2501 Noratlas medium transport aircraft, similar to the United States' C-119. Unpressurized and powered by two piston-driven engines, it lacked the payload and the range to quickly and effectively deploy the JIF. Quantitatively, the Air Staff acknowledged that the entire airlift fleet could deploy no more than 400 tons in 48 hours to support an operation 5,000 kilometers (km) from France. Exercise Alligator III in September 1967 proved the point: The deployment of the JIF exercise in the Ivory Coast had to rely heavily on sealift for combat and support equipment due to airlift limitations.¹¹ The acquisition of 50 C-160 Transalls to replace the N-2501s that began in 1968, supplemented by three long-range DC-8Fs, significantly boosted the FAF airlift capability, but it still fell short of its requirement to project the JIF.

The FAF implemented the French military strategy using both forward-deployed assets in the French overseas bases and French-based units dedicated to supporting the JIF when it deployed. The number and type of FAF combat aircraft based in Africa reflected the assessment of the threat. The FAF initially deployed two squadrons of seven to eight AD-4 Skyraiders previously used for counterinsurgency (COIN) operations during the Algerian conflict (1954–62). The force shrank to only one attack squadron that was based in Djibouti in 1975 and received North American F-100D/F Super Sabres in replacement for its aging AD-4s. At the same time, the FAF designated only two French-based squadrons to support the JIF, each equipped with aging Sud-Ouest Vautour II medium bombers.¹²

Operations during that period confirmed the threat assessment made by the Air Staff. Relying heavily on ground troops and encountering only guerilla units, the French mili-

tary seldom used its few attack assets. In fact, most of these operations were typical of the early days of independence. They called for a limited show of force and police action against civilian riots or small guerilla groups. An example is the rescue of the Gabonese president M'ba in 1962. Mutineers from the Gabonese army had taken him prisoner, and the FAF airlifted French paratroopers from Brazzaville and Dakar to Libreville to free the president and squash the rebellion.¹³ The only notable exception was the operation against the *Front de Libération Nationale* (FROLINAT) in Chad from 1968 to 1975. The 2,600-strong French land component faced highly mobile and better armed rebels. Using lightly armored columns and helicopters to search and destroy the enemy, the French joint task force (JTF) also relied on four Skyraiders detached to N'Djamena in 1968 to support its COIN operations. Still, despite some bouts of heavy fighting, the JFC did not call for a stronger air component, and the FAF only had a secondary role in a mostly land-centric operation.¹⁴

The Rise of the Jaguar: Giscard d'Estaing, Mauritania, and Chad, 1975-81

President Giscard d'Estaing's interventionist policy came when the French military faced a growing threat in Africa. Soviet-backed Libya, Somalia, and Angola had access to Soviet armaments and built strong conventional forces equipped with the latest ground-to-air missiles and combat aircraft. They provided guerilla formations with modern weaponry that threatened FAF assets. For example, in April 1978 FROLINAT launched a major offensive against the Chadian government and destroyed a French-piloted AD-4 Skyraider with an SA-7 missile.¹⁵ At the same time, the shortfalls of strategic and tactical airlift became more and more apparent. Without the capability to quickly deploy troops, the French military strategy that relied mainly on ground forces became unrealistic. Only airpower through the use of modern, air-refueled fighter-bombers could provide the survivability, flexibility, and rapid-response capability to counter the growing threats.

Airlift limitations plagued the ambitious French operation during the crisis affecting the Shaba province of Zaire in the spring of 1978. On 12 May 4,000 rebels coming from Angola captured the mining center of Kolwezi (Zaire), where 2,500 Europeans (mostly French and Belgian) resided, and started to massacre them. The rebels also threatened Zairian president Joseph-Desire Mobutu, a key ally against the Soviet influence in the region. It was necessary to act quickly and forcefully; so, on 17 May President Giscard d'Estaing authorized Operation Léopard to retake the city. Unfortunately, the FAF had already committed its airlift assets in Mauritania and Chad in support of ongoing operations. To deploy troops to Zaire, the FAF had to rely on five long-range French commercial transport aircraft (four DC-8s and one B-707) under the Civil Reserve Air Fleet (CRAF) program to fly the 2d Foreign Legion Parachute Regiment (2d REP) to Kinshasa. Simultaneously, USAF C-5As and C-141s provided the necessary logistics support, with 31 sorties that transported 931 tons of cargo and 124 passengers. On 19 May three French C-160s, followed by four Zairian C-130s, dropped 400 paratroopers from the 2d REP for the first large French airborne assault since the Suez crisis in 1956. The French legionnaires secured the city and its airport at a cost of four killed and 14 wounded.

Even if the operation had been a tactical success, it showed how limited the FAF airlift capabilities had been. In any crisis involving more than a few hundred enemy rebels, it became unlikely that France could project the necessary quantity of ground troops to help its pre-positioned forces defeat them. Besides, the solution to enlarge French presence overseas was impossible financially and politically. Airpower could then provide an alternative answer by using modern combat aircraft based in France and quickly deployable to overseas bases in time of conflict.

The FAF had already started to acquire the right tool to implement the new strategy: the Jaguar fighter-bomber. Developed with the British, the French version of the aircraft had incorporated modifications to tailor it to overseas operations. A simple and rugged navigation system had replaced the much more complex avionics of the Royal Air Force Jaguars designed for operations in Europe. The aircraft also featured an air-to-air refueling (AAR) capability

and could operate in an austere environment. To support President Giscard d'Estaing's interventionist policy, the FAF dedicated the entire 11th Wing to rapid overseas deployment, with a strong emphasis on overseas training and at least one squadron on permanent alert. Other Jaguar squadrons of the 7th Wing focused on suppression of enemy air defense (SEAD) and nuclear strike but trained for overseas deployment as a secondary mission.¹⁶

In conjunction with the Jaguar, the FAF modernized its interceptor fleet with an air-to-air capability to face the threat posed by the modern Soviet fighters available to some African countries. By the end of the 1970s, the 5th and 30th Wings had received the AAR-capable Mirage F-1C-200 interceptors and were ready to deploy with the 11th and 7th Wings. The 11 C-135F aerial tankers that were initially dedicated to the support of strategic operations would provide the necessary aerial refueling. Despite budget limitations, the Giscard d'Estaing administration also tried to ease the airlift shortage by acquiring two additional DC-8Fs and 29 new AAR-capable C-160NGs (new generation).¹⁷ All the Transall NGs could accommodate a kit that converted them into aerial tankers, capable of refueling both the Mirage F-1C-200s and the Jaguars. Finally, the FAF tried to develop its early warning and command and control (C²) capability of overseas operations. Without any E-3s—France did not participate in the NATO E-3A program—the FAF had to rely on the French Navy Atlantic, a maritime patrol aircraft designed for antisubmarine warfare but that could also act as an airborne C² and electronic intelligence (ELINT) platform and communications relay station. Eventually, in 1977 a modernized version of the Atlantic (called the Atlantic 2) brought a significant improvement in ELINT and surface targets detection in conjunction with a limited aerial early warning capability.

The first test for the modernized FAF happened in Mauritania. Since 1973 the Algerian- and Libya-backed Polisario Front had been fighting for the self-determination of the Western Sahara province against the Mauritanian government. Its primary targets were Mauritanian and French interests in the region. Using guerilla tactics, the Polisario had even launched a raid against the Mauritanian capital, Nouakchott, which had prompted the government to sign new military agreements with France in 1976. Shortly there-

after, the abduction of eight French technicians during a Polisario raid on the ore mining center of Zouérat started Operation Lamentin. Besides rescuing the hostages, the operation significantly reduced the Polisario's ability to conduct large raids against economic targets. It was a combined effort with the Mauritanian and Moroccan military, with France playing a supporting role. For that reason, France did not base any fighters on Mauritanian soil but provided guidance for Moroccan companies to expand the airfields at Nouakchott and Atar so the Moroccan Air Force could deploy its Northrop F-5s and Mirage F-1s there.

For the FAF, it was the first operational test for the Jaguars and the first air-centric joint operation commanded by an FAF two-star general.¹⁸ Ten Jaguars deployed in Dakar and Cape Verde in Senegal, supported by two C-135Fs, would provide the firepower against Polisario columns. Command and control involved French Navy Atlantic maritime patrol aircraft and the set up of relay stations inside Mauritania, all linked to the French embassy in Nouakchott that would act as a rudimentary combined air operations center.¹⁹

Initially, the Jaguars and the Atlantics conducted reconnaissance missions and were aided by Mirage 4-A strategic bombers conducting high-altitude reconnaissance missions. They provided intelligence and targeting information that proved critical in the success of the air raids that started in December 1977. The destruction of a 200-vehicle Polisario column between 10 and 12 December 1977 is a typical example of the joint and combined *modus operandi*. On 10 December 1977, two Atlantics from the French navy 21F Flotille detected the column heading towards the Zouérat-Nouadhibou rail line. Two days later, they guided a first raid of Moroccan F-5s and T-6s, followed by Jaguars flying from Dakar and striking the rebels with their two 30-millimeter (mm) cannons and rockets. The Jaguars attacked again on 13 December, and the column was totally annihilated, without any loss on the French side.²⁰ The FAF would repeat this kind of mission on 18 December 1977 and on 3 May 1978, when six Jaguars flying from Senegal engaged an enemy's column in the open desert and systematically destroyed it. Unable to achieve military success, the Polisario decided to negotiate with the Mauritanian government. After both par-

ties started discussions at the end of 1978, FAF operations in Mauritania ended.²¹

While diplomats took over in Mauritania in 1978, another crisis erupted in Chad. The FROLINAT had taken the offensive again—this time with modern Soviet weaponry supplied by Libya—and scored numerous victories against the Armée Nationale du Tchad (ANT). As the situation further deteriorated in April 1978, the Giscard d'Estaing administration ordered the deployment of a 1,700-man joint task force composed of Foreign Legion troops to block the rebel advance towards the capital. Still, because of the concurrent crisis in Kolwezi, the French military had to divert much of its airlift and the 2d REP from Chad to Zaire. Drawing from the lessons of the conflict in Mauritania, the Joint Chiefs of Staff (JCS) decided to compensate for the loss in combat capabilities in Chad by using offensive airpower to stop the FROLINAT.

Deploying from France and the French base in Abidjan (the Ivory Coast), 12 Jaguars arrived in N'Djamena in May 1978, supported by two C-135Fs and one Atlantic.²² Their mere presence on Chadian territory was designed to deter further FROLINAT offensives. This did not succeed, partly because the FROLINAT assumed France would be too busy in Zaire to effectively support the ANT. The FROLINAT launched its main offensive against the ANT defensive lines on 18 May, with N'Djamena as the ultimate target. In two decisive engagements in late May and early June around the key positions of Ati and Djadda in Central Chad, Foreign Legion cavalry and marine infantry supported by light helicopters and Jaguars defeated the rebels. The firepower of the Jaguars was a key factor: in one single attack near Djadda, the fighter-bombers killed more than 200 rebels.²³

The seven years of the Giscard d'Estaing presidency (1974–81) provided the foundations for the use of airpower in Africa. To implement its policy of increased interventionism, the Giscard administration shifted from the previous reliance on ground troops to a much heavier use of airpower. The move was the only effective way to address the limitations in airlift that continued to plague the French military. Operations in Mauritania and Chad were the landmark cases that proved that modern and robust fighter-bombers like the Jaguars could be effective in desert warfare against irregular troops.

From then on, the FAF would be one of the key components of any joint task force sent to address an African crisis.

Operation Manta (1983–84): New Challenges for French Airpower

In May 1981 Giscard d'Estaing lost the presidential election to the French Socialist Party (PSF) leader François Mitterrand. The PSF had been a strong critic of the previous administration's interventionist policy, arguing that it behaved like a "pyromaniac fireman" in Africa.²⁴ As part of its preelection program, the new socialist government decided to favor negotiations over military intervention, the latter taking place only "at the express desire of an African leader and preferably only in conjunction with African forces."²⁵ It was with this mind-set that the Mitterrand administration faced its first serious crisis in Chad. This time the FAF would face the bulk of the modern Libyan air force (LAF) supporting Chadian rebels. Due to President Mitterrand's emphasis on a diplomatic solution, the French military would commit its assets in Chad on a strict defensive mission to try to separate warring parties. Rules of engagement (ROE) became restrictive: unless for self-defense, the use of firepower required approval by the highest political authorities in Paris. With all these limitations, Operation *Manta* succeeded only in reaching a politically and economically costly stalemate, which forced the Mitterrand administration to reconsider its African policy.

When civil war broke out again in 1980, the opponents to Chadian president Hissene Habre, led by Goukouni Oueddei and his Armée de Libération Nationale (ALN), sought the help of Libya, which intervened in force to back its allies. From 1980 to 1983, heavy armored forces of the Libyan regular army, equipped with T-54s and artillery and protected by mobile air defense systems (ZSU-23/4, SA-9), supported the rebels each time they suffered setbacks at the hands of the renamed Forces Armées Nationales Tchadiennes (FANT). The LAF provided effective firepower and spearheaded attacks against major objectives like Faya-Largeau, launching 15 raids in three days in July 1983 using MiG-23s, Su-22s, and Mirage 5s.²⁶ This prompted President Habre to ask for direct French military assistance against Libyan airpower.

President Mitterrand reluctantly agreed to the Chadian demand but requested from the French JCS a course of action that would avoid a direct confrontation between French and Libyan forces. The purpose was to deploy ground troops north of N'Djamena to act as a peacekeeping force between both parties. Operation Manta started on 11 August 1983, with strict ROEs: French forces could open fire only if directly threatened.²⁷

Two issues quickly arose. The first one was the recurrent problem of a lack of airlift capabilities, this time further emphasized by the concurrent deployment of 2,000 troops in Lebanon as part of the Beirut Multinational Force. Because of the urgency of the situation in Chad, air was the fastest way to reinforce the small contingent of French ground troops that had deployed by land from the CAR. Difficulties arose when Algeria denied overflight rights, which forced FAF crews to fly either west via Casablanca, Dakar, and Abidjan or east via Tunis and Khartoum. The new AAR-capable Transalls and the FAF DC-8s could not fully address the issue, so the FAF had to lease 30 Boeing B-747s and DC-10s under the CRAF program. This development created other problems as well, since the heavy airlifters could not land in N'Djamena due to the short runway. The airlifters had to fly first to Bangui in the CAR, where multiple Transall rotations would carry men and equipment to the Chadian capital. There, a shortage of aviation fuel forced the C-160s to depart from Bangui with enough fuel for the round-trip, which severely decreased their maximum payload capability: it took an average of eight to 10 Transall rotations to fly an entire DC-8 load (30 tons) to N'Djamena. By the end of the first week of the operation, the FAF had been able to project to Chad only 900 troops equipped with a few AML-90 wheeled armored vehicles and 120 mm mortars.²⁸

The second major issue facing the French military was the threat posed by the LAF during the deployment of the French forces. Air strikes targeting the N'Djamena airport and French units were most likely to occur. The FAF alone could not work this issue, and France requested the help of the United States. At the start of the operation, the US Air Force deployed two E-3A (airborne warning and control system) and eight F-15s with two KC-10s to Khartoum, while the US Navy Sixth Fleet intensified its operations in the Gulf of

Sirte.²⁹ This show of force was enough to deter the LAF and to guarantee the safe deployment of French troops.

By the end of August, 1,750 French troops, supported by SA-341 Gazelle antitank helicopters, had built three key defensive positions in Moussoro, Abéché/Biltine, and Ati to protect N'Djamena. During that time, the FAF had started to reduce its dependency on American air superiority and to deploy its own fighters. Due to the same shortage of aviation fuel that plagued the airlift effort, any attempt to use N'Djamena as a forward operating base was initially out of the question. The FAF already had four Jaguars based in Libreville (Gabon) and deployed four others and three C-135Fs in Bangui, where the French navy provided two Atlantics. These aircraft provided a detection of ground targets and airborne radio relays. The FAF also worked the fuel issue. It created a petroleum, oils, and lubricants supply chain using between 350 and 400 tanker trucks leased by French oil companies that followed a 1,000-mile route from western Africa through Cameroon and Nigeria. It also contracted commercial airlines to fly some fuel to N'Djamena. This logistics effort provided enough fuel to deploy four Jaguars, four Mirage F-1C-200s, and one C-135F to N'Djamena on 21 August.

The Mirages were critical to address the threat posed by the LAF. They reinforced the air defense assets already in the theater (one Crotaie battery). Also, the FAF installed several surveillance radars along the defensive line protecting the capital to detect any intrusion at medium or high altitude. Still, the radar coverage provided only a 15-minute warning against a strike targeting the N'Djamena airport and its high concentration of aircraft, further increased by the lack of parking space. Throughout the operation, the Mirages flew at a high tempo, providing combat air patrol for the Jaguars and escorting the Atlantics during ELINT missions.

After a welcome lull in the summer, major combat operations resumed in September, with an ALN offensive towards Oum-Chalouba. By that time it was obvious to the rebels that the French would not use their airpower in offensive operations as they had in 1978. Still, the French presence had achieved a certain level of deterrence, and the Libyans did not back the attack with their own air force. Also, mul-

tiple overflights of rebel columns were sometimes enough to intimidate them, as happened during the attempted attack against Koro-Toro on 11 September.³⁰ However, the strict ROEs quickly showed their limitations and were a contributory cause to the loss of a Jaguar and its pilot. The French fighters could use only cannon fire against the enemy, and several times during the operation, they had taken too much time to get the authorization to open fire.³¹ History repeated itself on 24 January 1984. In the morning, Jaguars and Mirages detected an ALN column protected by ZSU-23s, which had previously attacked a FANT position and taken two Belgian doctors as hostages. The column fired at the aircraft using SA-7s, and the Jaguars returned cannon fire. They kept following the column until 1700 (military time), when they finally got permission to launch a full-scale attack. Two Jaguars supported by two Mirage F-1Cs strafed the rebels, who were ready for them. ZSU-23s badly damaged one of the Mirages and shot down one Jaguar, killing its pilot.³²

The loss provoked a strong reaction from the French government. It sent additional troops and Mirages to Chad, boosting the force to 3,500 men, and created a free-fire zone along the 16th parallel. Still, Operation Manta was draining French financial resources, and France appeared increasingly bogged down in Chad. President Mitterrand was eager to negotiate a settlement and started negotiations with Col Mu'ammar Gadhafi, despite the strong opposition of the Chadian government. In September 1984 negotiating parties reached an agreement, and both the French and the Libyan governments agreed to withdraw their troops. On 7 November Operation Manta was over.

The operation revealed numerous lessons. At the strategic level, it had drained a lot of financial resources but had solved nothing. The Chadian government quickly pointed out the evidence of Libyan activities in northern Chad, contrary to the negotiated agreement with France. In fact, the LAF was even building a large airfield in Ouadi Doum and had deployed five Mirage F-1s (purchased from France during the 1970s) and nine Su-22s in Aouzou. These violations of the agreement became embarrassing for the French government.³³

At the operational level, the government had imposed considerable restraint on the use of military force, which

had prevented the FAF from mounting an effective air-interdiction campaign against the ALN and had contributed to strengthening Libyan military capabilities in Chad. Also, the ineffective airlift bridge had shown the considerable difficulties in projecting a large number of ground forces.³⁴ This convinced the French JCS that relying primarily on airpower was the only way to project power in Africa. It also meant that to be effective, future air operations had to be more massive and, in the case of Chad, had to address the threat posed by the LAF through a robust offensive counter-air campaign.³⁵ Finally, the lack of adequate radar coverage forced the FAF to rely on USAF E-3s to provide a better warning about an impending LAF attack.³⁶

One of the few positive aspects of Operation Manta was the renovation of the N'Djamena airport. France had upgraded the runway so that it could accommodate large cargo aircraft and more parking spaces.³⁷ This would be necessary for future developments of the Chadian crisis.

Operation Epervier (1986–87): Jaguars and Mirages against the Libyan Air Force

On 10 February 1986, the ALN broke the truce with the Chadian government and took the offensive south. Libya provided troops from its Islamic Legion as well as armor and artillery. France found itself in a situation similar to 1983, except that this time the forward operating bases the LAF had built in Faya-Largeau and Ouadi Doum posed a more serious threat to any French airlift effort in support of the Chadian government. Still, France could not ignore the flagrant violation of the 1984 agreement and decided to intervene. Learning from the lessons of Operation Manta, the French government approved a much more air-centric military intervention, which would target the LAF in northern Chad through an aggressive offensive counterair campaign. Operation Epervier (Sparrowhawk), as it would be named, contributed to the complete stoppage of the Libyan infiltration in the Chadian civil war.

After the first week of combat, the FANT had been able to hold its ground against the ALN and the Libyans, but the

probability of renewed offensives asked for a French intervention to stabilize the situation in Chad. The strategic objective was to compel Libya to stop its present involvement in the internal political situation in Chad and to deter it from further implication. At the operational level of war, the French military decided to limit French ground forces' involvement to providing training and logistics support for the Chadians.³⁸ The bulk of the combat operations would rely on the FAF with a clear mission: to stop LAF operations in northern Chad and protect the N'Djamena airport. The command of the JTF reflected the air-centric aspect of the operation, with an FAF officer acting as the JFC.

Operation Epervier started on 16 February 1986, with a strike against the LAF facilities at Ouadi Doum. To maintain an element of surprise, the FAF used its assets already deployed in Africa. Twelve Jaguars, four Mirage F-1s, three C-135Fs, six C-160s, and two Atlantics, most of them based in Bangui, constituted the air component of the JTF.³⁹ Armed with BAP-100 antirunway bombs and supported by the C-135Fs for the five-hour, 2,400-nautical-mile round-trip from Bangui, the strike package included 10 Jaguars. Mirage F-1s provided air cover, while the Atlantics supported the raid with their ISR and communications relay capability. The surprise raid was a success. Concentrating on the runway, the strike scored several direct hits that rendered it temporarily unusable.

Unable to deploy its fighters to its main forward operating base, the LAF could not stop the massive FAF airlift bridge that started right after the raid from Bangui to N'Djamena and flew badly needed supplies to the FANT. Still, the Libyans attempted a strike at the N'Djamena airport on 17 February with a single Tu-22 that scored a hit on the runway but did not prevent the airlift bridge from proceeding as planned. The strike came undetected from southern Libya, confirming the weakness of the FAF radar coverage and the need to boost air defenses around the Chadian capital.⁴⁰ In early March, USAF C-5s flew in a French Army Hawk long-range battery. The radar coverage and early warning capability also received a boost with the deployment of a radar station in Moussoro, 200 km northeast of the capital, and the arrival of one DC-8 Sarigue ELINT platform and one C-160 Gabriel signals intelligence platform in the theater.⁴¹

The raid on Ouadi Doum succeeded in deterring Tripoli from further deployment of the LAF in Chad. The situation on the ground reached a stalemate that lasted for six months. France tried to use that time to find a settlement with all parties involved and did not take part in direct combat operations as long as the Libyans did not operate south of the 16th parallel.⁴² However, when the FANT launched a successful offensive against the enemy at the end of 1986, the retreating Libyan military retaliated by sending the LAF on a raid south of the 16th parallel, thus directly challenging France. Responding to the Libyan aggression, the FAF came back at Ouadi Doum on 7 January 1987, this time on a SEAD mission targeting the Libyan SA-6 radars. Striking the airfield had become far more dangerous than in February 1986. The Libyans had built a strong air defense around the base, with five SA-6 batteries and numerous anti-aircraft artillery. For the raid, two Mirage F-1CRs acted as baits for the SA-6 radars, while eight Mirage F-1Cs supported two Jaguars armed with AS-37 Martel anti-radiation missiles. The raid successfully destroyed the main observation radar of an SA-6 battery.⁴³

The Libyan ground forces kept suffering numerous defeats at the hands of the FANT throughout the spring of 1987, which included a daring surprise attack against a LAF air base in southern Libya. Blaming the French, Gadhafi used two Tu-22s to launch another attempted strike at the N'Djamena airport on 8 September 1987. To avoid detection, the bombers flew along the western border of the country and tried to mix with civilian air traffic. Still, this time the French air defense system worked, and the Hawk battery destroyed a Tu-22, while the other turned back.⁴⁴

This would be the last encounter between the LAF and the French military. On 11 September 1987 Libya and Chad agreed on a cease-fire, and at the next Organization of African Unity summit, Libya agreed to settle the dispute by going to the International Court of Justice.⁴⁵ Subsequently, France dramatically reduced its military posture in Chad but never terminated Operation Epervier. Since 1986 the FAF has maintained a strong presence in Chad to protect Chad against any external aggression. This has enabled the French government to maintain some control over the tumultuous Chadian internal politics.

Compared to Operation Manta, Operation Epervier proved far more successful. When used with determination, French airpower stopped the LAF from expanding its facilities in northern Chad and successfully deterred any escalation of the Libyan involvement. At the same time, French ISR assets provided critical information for the FANT to mount a series of inspired offensives that repelled Gadhafi's forces back to Libya. For the French, the success came at a far lesser human and financial cost than Operation Manta. It also relied on a successful partnership with the FANT and its leader, Idriss Déby, who proved to be a gifted commander.

Still, the operation highlighted some limitations of the FAF and involved a high level of risk. When conducting the raid on Ouadi Doum, the French hoped to send a clear message to Gadhafi but at the same time tried to prevent an open conflict with Libya. They were successful in reading the Libyan leader's mind correctly. However, if Tripoli had ordered the LAF to react more forcefully in the first weeks of the operation, it is likely that it would have been able to stop the French airlift effort. At that time the FAF did not have the capability to establish air superiority over southern Chad. To establish it, the FAF had to rely on USAF airlift to fly the Hawk batteries and the surveillance radars that proved critical during the 8 September 1987 raid. Also, the AS-37 Martel antiradiation missiles used on 7 January 1987 against SA-6s did not prove very reliable.⁴⁶ Without an effective SEAD capability, any escalation of the conflict with Libya would have become problematic for an FAF unable to strike Libya's forward air bases.

French Airpower in the Post-Cold War Environment: From One NEO to the Other

In Africa, the end of the Cold War sent a wave of destabilization that triggered numerous conflicts into the 1990s. Countries that had received financial and military support from one superpower or the other suddenly found themselves abandoned by their patron. In the case of Zaire, the corrupt and authoritarian regime of President Mobutu stopped being the West's best ally in central Africa and became one of the more embarrassing.⁴⁷ Its demise had mul-

multiple ripple effects that caused civil wars in Zaire, Congo, Rwanda, Burundi, and the CAR.

Facing this uncertain environment, the French military had to conduct numerous noncombatant evacuation operations (NEO) in the 1990s. These NEOs shared several common characteristics. They all involved an initial deployment of French overseas forces using the pre-positioned airlift assets of the FAF. C-160s or C-130s stationed in Libreville, Bangui, or N'Djamena, together with French army troops, formed a quick-reaction force deemed to be critical to the success of the operation, as exemplified by the NEO in Zaire in 1991.⁴⁸ By contrast, without any forward basing of its C-130s, the Belgian Air Force suffered delays and had to rely on USAF airlift support to fly troops from Europe during the 1993 NEO in Zaire.⁴⁹ Also, these operations were conducted amid a raging civil war where the different factions did not target French assets and personnel directly. Consequently, the level of threat remained acceptable for the employment of tactical transport aircraft, and the FAF did not need to deploy combat aircraft to provide a deterrent presence or to conduct supporting combat operations. These operations used an intermediate staging base (ISB) from which the FAF would operate and fly the evacuees. In all cases the ISB was the French base where the transport aircraft were stationed, which further stressed the importance of forward basing for the FAF.

Operations after the Rwandan Trauma: RECAMP, Special Forces, and Airpower

The year 1994 marked a watershed in French involvement in Africa. Two distinct events occurred during that year. The first one was the publication of the 1994 white paper on defense that paved the way for France's defense policy in the post-Cold War environment. The white paper would have a strong impact on the French military and led to a reduction in format and the end of conscription. The second one was the genocide in Rwanda and the French controversial intervention there, called Operation Turquoise.

Operation Turquoise did not involve a significant use of airpower apart from the traditional reliance on FAF C-160s and C-130s to deploy ground forces and perform some hu-

manitarian airdrops in May 1994. However, at the strategic level, Rwanda marked the end of France's direct intervention policy. Critics accused the operation of being ineffective in preventing the genocide of the Tutsi population while having facilitated the escape of key Rwandan personalities involved in the genocide.⁵⁰ The French government also faced a parliamentary inquiry that stressed the lack of transparency and coherence of the African policy.

The RECAMP policy that followed has emphasized multilateralism and African states' military capabilities so that they can take the matter of regional instability and peace-keeping operations into their own hands. The French military has adapted to the new policy by shifting from a traditional reliance on the third pillar to the first one, the African states' military, supplemented by the use of French Special Forces and airpower to boost maneuverability and firepower.⁵¹ This French version of the Afghan model has found its place in the FAF doctrine regarding combat airpower related to special operations.⁵² This document defines two concepts of use: intelligence support and fire support.⁵³ The first one uses such traditional ISR assets as the Atlantic 2 or the Mirage F-1CR (reconnaissance version) and also such combat aircraft as the Mirage 2000D with its targeting pod in a nontraditional ISR role. The second one emphasizes the synergy between the combat aircraft and the joint tactical air controller, which allows CAS to be the most effective. The FAF 10th Air Commando Group has specialized in laser designation of targets for the combat aircraft and has received considerable combat experience working with Mirage 2000Ds armed with GBU-12 laser-guided bombs (LGB) in Afghanistan.⁵⁴

Operation Artemis in the Democratic Republic of Congo (DRC) in 2003 typifies the implementation of the new French policy in Africa and the key role played by French Special Forces and airpower. To support the United Nations Mission (MONUC) in the DRC and to protect populations fleeing the ethnic strife in the Ituri province of northeastern DRC, the new foreign policy branch of the EU launched the operation under United Nations Security Council Resolution 1484. France provided most of the troops (1,785 out of 2,200), as well as the command and control structure. Uganda agreed to host the force in Entebbe, and its deploy-

ment began on 7 June 2003, with strategic airlift provided by chartered AN-124s. To achieve its objectives, the JFC tasked the air component to provide a day-and-night deterrent presence over the Ituri province, an ISR capability, and ultimately CAS, if needed. These tasks posed significant challenges for the air component commander. At this time of the year, low ceilings and moisture negatively affect the Ituri province, which compelled the FAF to deploy all-weather-capable assets. On 5 June five Mirage 2000Ds equipped with terrain-following radars, LGBs, and targeting pods deployed from France to N'Djamena to provide that all-weather capability. Later in June the FAF relocated its five Mirage F-1CTs and CRs already in Chad to Entebbe. Also, due to the long distance from the Ituri province, two C-135FRs flew to Libreville to reinforce the air-to-air refueling capability provided by the lone C-135FR already in N'Djamena. The FAF then put two Mirage 2000Ds on a 3.5-hour alert notice (5.5-hour at night). A typical mission would involve multiple air refuelings and last up to seven hours, with two hours on station over Ituri. Another challenge was the setting up of an adequate combat search and rescue capability. The two SA-330 Puma helicopters deployed in Entebbe could provide a quick extraction of a downed crew in Ituri. However, the long transit from N'Djamena to the theater over Chad, the CAR, and the DRC meant that any rescue operation over these remote and sometimes hostile areas would involve significant time and complexity. The FAF came up with a plan that used French army Cougar helicopters based in Gabon and Cameroon and several pre-positioned stocks of fuel in the DRC. Still, providing an adequate response to any flight emergency remained an important issue for the air component commander.

On 6 June 2003, C-160s and C-130s infiltrated special forces into Bunia, the capital of the Ituri province, to secure the airport and start the deployment of the main force. Mirage F-1s protected the safe infiltration of these forces. The next day 2000Ds flew their first CAS mission using LGBs. The effect on the aggressiveness of enemy militias was significant. Later in the month, high-speed, low-level passes by the Mirage 2000Ds using their all-weather, terrain-following capability proved sufficient to deter further attacks on European forces. The JTF completed its

mission by the end of August, and the transfer of authority between the European force and the MONUC became effective on 1 September 2003. At that time the FAF combat assets had flown 730 hours in 220 missions supported by 115 air refueling sorties.⁵⁵

Operation Artemis provided satisfaction for the FAF. The synergy between its tactical transport aircraft and special forces had proved decisive in securing the airport in Bunia. Also, airpower had demonstrated the multiple options it brought to the JFC because of the progressive use of force it could provide. What could start as a dedicated ISR sortie could evolve into a show of force using such nonkinetic means as a high-speed pass and possibly culminate in a strike ranging from gun strafing to using LGBs. This flexibility derived from the partnership between special forces and the FAF that had started in 2000 and proved its operational soundness in Afghanistan. The French version of the Afghan model had demonstrated that its force-multiplying effects could apply to several situations, from increasing the firepower of African forces like in the CAR in 2007 to supporting endangered peacekeeping forces like in the DRC in 2003.⁵⁶ It could provide these effects at the cost of a small footprint on the ground and little collateral damage.

The Ivory Coast: Back to a Ground-Centric Strategy?

Despite the growing success of the partnership between airpower and special forces, the French military responded to the crisis that erupted in the Ivory Coast in October 2002 with a predominately land-centric operation.⁵⁷ When Pres. Laurent Koudou Gbagbo requested French support against rebels that had seized the northern part of the country and attempted to march to Abidjan, France decided to launch a dual-purpose military intervention called Operation Licorne (Unicorn).⁵⁸ Its primary mission was to protect French nationals against the growing violence. The second part of the mission was far more challenging. Its objective was to force a military status quo between the rebels and the Forces Armées Nationales de Côte d'Ivoire (FANCI) that would compel both parties to negotiate and avoid a definitive partition of the country.

Operation Licorne started as a heavy land-centric intervention that relied on the marine infantry battalion in Abidjan, reinforced by the paratroop companies stationed in Gabon and elements of the French Foreign Legion flown from France. The FAF used its tactical airlift to support the operation but initially did not deploy any combat aircraft. The only offensive airpower capability in the theater was provided by four Gazelle light-attack helicopters from the French army. French forces succeeded in stopping the rebel advance on the capital in October 2002, and it seemed at first glance that they had achieved their mission of forcing both parties to negotiate during the Marcoussis peace talks held from 15 to 23 January 2003. In fact both the rebels and the FANCI were using the cease-fire to strengthen their military capabilities. By late 2002 and early 2003, the FANCI acquired four Mi-24 attack helicopters and two MiG-23MLDs from Bulgaria, four Su-25s from Belarus, and Israeli-made unmanned air vehicles. Mercenaries from South Africa and Eastern Europe provided the crews.

At the same time, relations between Paris and Abidjan became tenser because President Gbagbo's partisans accused France of not providing the necessary support to totally defeat the rebels. In December 2003 anti-French riots started in the Ivorian capital. These riots would continue during the spring of 2004, as the FANCI were preparing for a major offensive against the rebels. Breaking the cease-fire on 4 November 2004, the FANCI launched an air strike against rebel positions using two Su-25s. The FAF decided to deploy three Mirage F-1CTs with air-to-air armament to the theater, but political constraints prevented their basing in Abidjan. Stationed in Libreville, they could not provide the visible presence that could deter an escalation of the conflict. On 6 November 2004 two Su-25s using 57 mm rockets deliberately targeted a French forward base in Bouake, killing nine French soldiers and an American citizen. The French reaction was forceful. Using antitank missiles, French forces destroyed all FANCI offensive air assets on the ground, while they were refueling after the attack.⁵⁹ The widespread anti-European violence that followed in Abidjan forced France to conduct an NEO on 7 November 2004. Gazelle helicopters protected the evacuation by keeping vital lines of communication open to French columns targeted

by rioters and elements of the FANCI. Also French troops had to secure the Abidjan airport after an FAF C-160 suffered damage on the ground from an RPG-7 rocket.⁶⁰

Despite this outburst of violence, both France and the Ivorian president were eager to avoid an escalation of the conflict. The latter was afraid that France would punish him by withdrawing the Licorne forces from the cease-fire line and letting the rebels capture the capital.⁶¹ By January 2005 all the parties involved were back to the negotiating table and agreed to respect the terms of the Marcoussis treaty.⁶² Since 2005 France has maintained a 3,000-man strong military presence in the Ivory Coast that provides a quick-reaction capability to the United Nations Operation in the Côte d'Ivoire set up to monitor the cease-fire.

Operation Licorne is still France's largest and most controversial military intervention in Africa.⁶³ At the operational level, the most striking aspect of the crisis, compared to other French operations in Africa, was the absence of any FAF combat aircraft deployed in the theater. Three main factors explain the lack of a stronger FAF presence. Initially, the availability of a robust French army force was deemed sufficient to address the crisis. However, 2002 and 2003 saw periods of heavy fighting with determined and well-armed rebels. A preliminary French army assessment of the operation published in July 2004 stressed the need to provide the Licorne forces with more firepower and the need to address the threat posed by the combat aircraft acquired by the FANCI, which were already operating against rebel positions in violation of the cease-fire agreements.⁶⁴ If airpower had been integrated in the planning of Licorne from the start of the operation, it would have addressed the French army concerns and provided the firepower and deterrent effect it had during Artemis. That it was not has enabled Mi-24s and Su-25s to violate the cease-fire in total impunity and ultimately attack French troops. In fact, in 2004 it was probably too late to deploy Mirage F-1s to Abidjan. Due to the growing anti-French feeling in the city and within the Ivorian government, the French JTF was not able to rely on Abidjan as a secure forward-operating base. The rocket strike against an FAF C-160 is a case in point. This forced the FAF to base its airlift assets in Togo and deploy Mirage F-1s in Gabon, too far from the Ivory

Coast to provide any deterrent effect during the November 2004 crisis. The third factor concerns the French strategy and the political constraints it faced. After the Marcoussis treaty in January 2003, French authorities emphasized the peacekeeping status of Operation Licorne. It was hardly time to deploy highly visible combat aircraft even in Togo, despite the growing tension between France and the Ivorian government and the threat posed by the Ivorian air force.⁶⁵

Conclusion

French airpower in postcolonial Africa has evolved from a limited supporting role in the early postcolonial era to bearing the brunt of the fight in Chad in 1986–87. Its flexibility has permitted its adaptation to the RECAMP policy favored by the French political authorities after the Rwandan conflict in 1994, through the effective partnership with special forces. At the operational level, the French military has learned four principal lessons from its involvement in Africa. The first lesson learned is that the availability of secure forward operating bases is essential. Without them, deploying forces is a long and painstaking process involving negotiations with potential host nations—hardly the ideal solution when the crisis calls for a rapid response. This lesson tends to be forgotten by the political authorities, due to the cost associated with maintaining permanent bases in Africa. Accordingly, since 1960 their number has declined steadily. Still, as former Licorne JFC, French army general Emmanuel Beth pointed out, “The cost to effectiveness ratio is in reality in favor of pre-positioning. When all is well, one considers it is expensive.”⁶⁶

The second lesson learned concerns airlift support. The lack of a strategic airlift capability has plagued French operations since 1960. The situation is even worse today, with the gradual phasing out of the C-160 and the delays in its replacement program, the Airbus A-400M.⁶⁷ The French air force has never truly addressed the issue, and French operations have strongly relied on external support, either from allies or through contracting with private air cargo companies.

A third lesson learned that has never been contradicted is the need for a robust ISR capability. In this domain

French airpower has fared better. Mirage F-1CRs and Atlantics have earned a well-deserved reputation as effective and complementary ISR platforms. They were instrumental in detecting enemy offensives in Mauritania and Chad.

The fourth lesson taught by the French operations highlights a need to systematically integrate airpower into the planning of an operation. So far, successes and failures in this domain have alternated: Operation Artemis showed the efficiency of a truly joint planning process, whereas Licorne failed to include airpower in the initial planning when it was probably still possible to deploy fighters in the Ivory Coast. With the growing level of threat faced by French forces in Africa, it is all the more important for JFCs to systematically include airpower in the joint campaign planning. To effectively do so, they need a French airpower doctrine at the operational level of war, a document that the FAF has not produced. Recent studies have pointed out the lack of doctrinal thinking other than at the tactical level in the FAF. The time has come to deliberate in a country where the administration budgetary process has recently converted to a “no concept, no money” approach!⁶⁸

Notes

1. Initially, the reason for France's involvement in its former colonies was economic because France wanted to protect its economic interests in young and potentially unstable countries. As part of the cooperation agreements signed in the 1960s, France secured a monopoly on the procurement of such African agricultural products as bananas, peanuts, palm oil, and cocoa and of such strategic minerals as uranium. In the 1980s uranium needed for the vast network of French nuclear reactors producing most of its electricity came almost exclusively from Africa (Niger, Gabon, and South Africa). French companies and large corporations maintained a strong presence in the former colonies, concentrated mostly in four countries: Senegal, the Ivory Coast, Cameroon, and Gabon. In these countries, French nationals managed plantations, oil extraction, and forest exploitation. In 1989 French expatriates in Gabon numbered 27,000, which was the highest proportion of whites in any African country except South Africa. Still, the economic importance of former French colonies has gradually diminished since the 1960s. The rise of the European Economic Community (EEC), promoting open markets, forced France to review its closed-market policy in Africa during the Yaounde and Lome conventions from 1981 to 1985. As more and more competitors gained access to Africa's markets, France lost its monopolistic position, and its large corporations started diverting their investments to other continents. In 2007 trade with all African countries accounted for only 16

percent of French exports and 12 percent of its imports. When detailed per country, the level of trade with sub-Saharan Francophone countries has remained low compared to other parts of Africa. In 1999 the total amount of exports to the four main economic partners of France in sub-Saharan Africa—Senegal, the Ivory Coast, Cameroon, and Gabon—totaled 12.1 billion French francs, the same amount as the exports to Algeria alone. These figures show that the economic impact of Franco-African relations cannot explain the amount of French political and military involvement anymore. Ministère de l'économie, des finances et de l'industrie, "Aperçu du commerce extérieur de la France en 2007," <http://lekiosque.finances.gouv.fr/APPCHIFFRE/Etudes/tableaux/aperçu.pdf>.

2. Chipman, *French Military Policy and African Security*, 2.

3. Facing an ongoing colonial war in Algeria, Charles de Gaulle attempted to satisfy the calls for independence of the other French colonies in a more peaceful manner. His first step was the creation of the French community by the ordinance of 7 January 1959. The aim was to provide the colonies with a certain degree of autonomy while preserving their unity under the French state, which would manage defense, security, and economic affairs on behalf of the community. The attempt was a failure due to the colonies' stronger aspiration for independence. Fearing that further delays in the decolonization process would increase tensions, France granted independence to the colonies of the Afrique Occidentale Française and Afrique Equatoriale Française in 1960. Pierre Bezbakh, *Petit Larousse de l'Histoire de France*, 731.

4. Chipman, *French Military Policy and African Security*, 7.

5. These two types of agreements guarantee France's monopoly on military matters in its former colonies. For example, Article 2 of the second annex of the defense agreement between France and Gabon states that "the Gabonese Republic, in consideration of the help granted by the French Republic, and in order to secure the standardization of armaments, contracts to call exclusively on the French Republic for the maintenance and renewal of its materials." Chipman, *French Military Policy and African Security*, 6.

6. *Ibid.*, 7.

7. *Ibid.*, 11.

8. With Angola, Mozambique, Libya, and Somalia getting military support from the Soviet Union, France was facing better-armed guerilla movements and states equipped with modern conventional forces that included combat aircraft. Lorell, *Airpower in Peripheral Conflict*, 12.

9. Publication Interarmées Instruction 03.121, *Concept de renforcement des capacités africaines au maintien de la paix*.

10. Lorell, *Airpower in Peripheral Conflict*, 7.

11. *Ibid.*, 10.

12. Each squadron belonged to the 92d Bomber Wing of the 2d Tactical Air Command (2 CATAC: *Commandement Aérien Tactique*) that would form the air component of the Joint Intervention Force. Lorell, *Airpower in Peripheral Conflict*, 9.

13. McNamara, *France in Black Africa*, 165.

14. Lorell, *Airpower in Peripheral Conflict*, 67.

15. *Ibid.*, 34.

16. Ibid., 16.
17. Ibid., 19.
18. Facon et al., *Abrégé d'histoire de l'aéronautique militaire et de l'Armée de l'air*, 51.
19. Lorell, *Airpower in Peripheral Conflict*, 30.
20. Ibid.
21. Facon et al., *Abrégé d'histoire de l'aéronautique militaire et de l'Armée de l'air*, 51.
22. Lorell, *Airpower in Peripheral Conflict*, 34.
23. Ibid., 35.
24. Chipman, *French Military Policy and African Security*, 14.
25. Ibid.
26. Lorell, *Airpower in Peripheral Conflict*, 41.
27. Ibid., 43.
28. Ibid., 45.
29. Cooper, "Libyan Wars, 1980–1989."
30. Lorell, *Airpower in Peripheral Conflict*, 46.
31. The process was cumbersome: if a fighter aircraft requested permission to open fire, it had first to contact the Atlantic on patrol, which would forward the request to the French JTF headquarters (HQ) in N'Djamena. The JFC had then to contact the French JCS HQ in Paris, which would forward the request to the highest political level. The pilot on station would get an answer through the same channel. For example when the ALN closed down on French positions on 6 September 1983, the French JFC launched two Jaguars and requested permission from Paris to open fire. It took more than one hour for the request to be processed, and by the time the JFC received an answer, the Jaguars had already turned back. Lorell, *Airpower in Peripheral Conflict*, 46.
32. Ibid., 48.
33. Ibid., 49.
34. Martel, *Histoire Militaire de la France*, 563.
35. Lorell, *Airpower in Peripheral Conflict*, 50.
36. Martel, *Histoire Militaire de la France*, 563.
37. Chipman, *French Military Policy and African Security*, 19.
38. The main reason was France's unwillingness to provide direct combat support to the FANT in its fight against the ALN, perceived as a purely internal conflict. The FANT would have to address the threat posed by the ALN on its own. Lorell, *Airpower in Peripheral Conflict*, 56.
39. Rouvez, *Disconsolate Empires*, 160.
40. Lorell, *Airpower in Peripheral Conflict*, 55.
41. Rouvez, *Disconsolate Empires*, 160.
42. Lorell, *Airpower in Peripheral Conflict*, 57.
43. Cooper, "Libyan Wars, 1980–1989."
44. Dessornes, "The Chadian Affair: A French Hawk Battery Engaged a Tupolev 22 Bomber."
45. Rouvez, *Disconsolate Empires*, 162.
46. Cooper, "Libyan Wars, 1980–1989."
47. Rouvez, *Disconsolate Empires*, 348.
48. Ibid., 346.
49. Ibid., 352.

50. Hansen, "The French Military in Africa."
51. The French Special Operations Command (SOC) is one of the youngest major commands of the French military. Created in 1992 as a result of lessons learned during Operation Desert Storm, it is a joint organization whose air component includes an FAF transport squadron equipped with both C-160s and C-130s and an FAF helicopter squadron with the new long-range EC-725 Caracal. The FAF also provides the 10th Air Commando Group for the land component.
52. Andres, Willis, and Griffith, Jr., "Winning with Allies."
53. Publication Armée de l'air 03.110, *Coopération équipages-forces spéciales dans le cadre des missions d'appui aérien. Concept d'emploi air.*
54. Le Saint, "Coopération équipages-forces spéciales dans le cadre des missions d'appui aérien-concept d'emploi air."
55. Wodka-Gallien, "The Tricolor Aloft: French Air Force Operations in 2003," 58.
56. In the Central African Republic (CAR) in the spring of 2007, French special forces provided targeting information to Mirage F-1s flying from N'Djamena to support CAR forces trying to repel rebel columns at the Chadian border.
57. From its independence until the death of its first president, Felix Houphouët-Boigny, in 1995, the Ivory Coast served as a model of development and economic growth for African countries. France maintained a strong economic presence in the country where 25,000 French nationals were living in 2002, coupled with a permanent military base in Abidjan hosting a marine infantry battalion and two FAF light helicopters. After the death of its emblematic ruler, the Ivory Coast experienced a slow process of economic recession and political destabilization, which culminated in the 2002 coup against Pres. Laurent Gbagbo. The rebels failed to oust the ruling president but succeeded in conquering the north part of the country where they had widespread support. From there, they attempted to launch an offensive against the capital. Fondation pour la Recherche Stratégique, *L'Afrique subsaharienne d'une crise à l'autre*, 11-12.
58. Initially President Gbagbo called for the implementation of the defense agreement with France in case of a foreign aggression. The French government refused because the crisis was an internal issue that involved no foreign aggressor. Indeed, more than 90 percent of the rebels were Ivorian, the rest being immigrants from neighboring countries that came into the Ivory Coast when its economy was booming. Fondation pour la Recherche Stratégique, *L'Afrique subsaharienne d'une crise à l'autre*, 23.
59. French forces also arrested the Eastern European mercenaries who had formed the bulk of the FANCI air arm and turned them over to their respective countries' ambassadors.
60. Cooper and Mladenov, "Cote d'Ivoire, since 2002."
61. Fondation pour la Recherche Stratégique, *L'Afrique subsaharienne d'une crise à l'autre*, 16.
62. *Ibid.*, 14.
63. A French observer even called it "France's little Iraq." See Hansen, "The French Military in Africa." Still, proponents of the French intervention have stressed its success in preventing large-scale massacres like those in

neighboring Sierra Leone and Liberia. Fondation pour la Recherche Stratégique, *L'Afrique subsaharienne d'une crise à l'autre*, 17.

64. Division Recherche et Retour d'Expérience, *Enseignements de l'opération LICORNE* (Septembre 2002–Juillet 2004).

65. *Ibid.*, 42.

66. Fondation pour la Recherche Stratégique, *L'Afrique subsaharienne d'une crise à l'autre*, 27.

67. "Long-term Consequences," *Aviation Week & Space Technology*, 12 November 2007, 52–53.

68. Verstappen, "Regards croisés sur les stratégies aériennes américaine, britannique et française."

Appendix A

Background on the History of the French Colonial Empire in Africa

Except Algeria, where the French presence began in 1830, most of the French colonial empire in Africa is a legacy of the Third Republic and such visionaries as Jules Ferry and Leon Gambetta, who started an aggressive expansion policy in the 1880s. On the eve of the First World War, France had established its colonial administration over most of western Africa. Its possessions further expanded when it took control of German colonies—Togo and Cameroon in 1918, and the administration remained unchanged until decolonization started in 1960.

The French administration assumed three different forms in Africa. Algeria received special treatment due to the Europeans who had settled there and accounted for a third of the population in 1960. No longer considered a colony, it became an integral part of France in 1848. Still, the native population had almost no political rights and thus no influence on the local political life, which was entirely in the hands of the Europeans. Tunisia and Morocco were protectorates; that is, the French ruled by controlling the local monarchy. Finally, the administration of the vast expanses of sub-Saharan Africa in western and central Africa and in Madagascar relied entirely on French colonial agency officials assigned there on a dual-purpose mission: first dealing with economics and the exploitation of Africa's raw material resources and agricultural products and also fulfilling a moral obligation to bring the benefits of civilization to the natives. This *mission civilisatrice* (civilizing mission) spread the French culture and language to make assimilation possible. As Francis Terry McNamara points out, "French linguistic and cultural proselytizing has been coupled with a willingness to accept as equals people who have acquired a good knowledge of French. This missionary zeal has had a subtle but substantial influence on wider French national influence and power."¹ This point would have a strong impact on the decolonization process. By having promoted a francophone elite, France was able to achieve a peaceful

transfer of power to new heads of state who were friendly to the French cause and in most cases were eager to keep strong ties with their former colonial power. These ties would assume the form of cooperation agreements with important defense-related clauses. In these countries that had composed the Afrique Occidentale Française (AOF: French Occidental Africa) and the Afrique Equatoriale Française (AEF: French Equatorial Africa) France would exert the strongest postcolonial political and military influence.

Note

1. McNamara, *France in Black Africa*, 127.

Abbreviations

AAR	air-to-air refueling
ACSC	Air Command and Staff College
ALN	Armée de Libération Nationale
ANT	Armée Nationale du Tchad
C ²	command and control
CAR	Central African Republic
CAS	close air support
COIN	counterinsurgency
CRAF	Civil Reserve Air Fleet
DCA	defensive counterair
DRC	Democratic Republic of Congo
ECOWAS	Economic Community of Western African States
EEC	European Economic Community
ELINT	electronic intelligence
EU	European Union
FAF	French Air Force
FANCI	Forces Armées Nationales de Côte d'Ivoire
FANT	Forces Armées Nationales Tchadiennes
FROLINAT	Front de Libération Nationale
GUNT	Gouvernement d'Unité Nationale de Transition
HQ	headquarters
ISB	intermediate staging base
ISR	intelligence, surveillance, and reconnaissance
JCS	Joint Chiefs of Staff
JIF	Joint Intervention Force
JFC	joint force commander
JTF	joint task force
KM	kilometer
LAF	Libyan air force
LGB	laser-guided bomb
MM	millimeter
MONUC	United Nations Mission in DRC
NATO	North Atlantic Treaty Organization
NEO	noncombatant evacuation operation
OCA	offensive counterair
OEF	Operation Enduring Freedom
PSF	French Socialist Party

RECAMP	Renforcement des Capacités Africaines de Maintien de la Paix
REP	Régiment Etranger Parachutiste
ROE	rules of engagement
RPIMA	Régiment Parachutiste d'Infanterie de Marine
SEAD	suppression of enemy air defense
SOC	Special Operations Command

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