

## ADAPTATION IN THE AIR FORCE. A CASE STUDY OF THE FRENCH AIR FORCE IN AFGHANISTAN

Jérôme DE LESPINOIS

*War and Air Force Strategy Researcher*

### ABSTRACT

The conceptual debate around military adaptation, launched in the 1980s by the work of Barry Posen and Williamson Murray, found new relevance with the engagement of Allied forces in Afghanistan in a counter-insurgency war. Many books have been published on this topic and the subsequent theme of military innovation, notably by Theo Farrell. However, very little research has focused on the action of air forces during the Afghan conflict. This research paper successively broaches the concept of military adaptation in the available scientific literature, then the adaptation of the French Air Force to the counter-insurgency war and, finally, the factors that have encouraged or hindered this adaptation process. This study proposes, in conclusion, a first approach to the characteristics specific to the air forces in the complex process of adaptation to new forms of conflict.

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The International Security Assistance Force (ISAF) was officially dissolved in Kabul in December 2014. While NATO remains in Afghanistan to conduct a training mission (Resolute Support Operation), the end of the ISAF mission brings to a close a phase that began in October 2001 with the first US airstrikes as part of Operation Enduring Freedom (OEF). The first three phases of OEF were extremely successful, as they broke away from the classic patterns of traditional engagements. They were however merely a prologue to the stabilisation phase that followed. Phase 4 began in June 2002 with Hamid Karzai being named as head of the Afghan Transitional Authority, while fighting continued from the previous phase in the mountainous regions. Allied soldiers, who were operating in an extremely remote area, were confronted with a culture that the majority among them had never encountered, among a society ravaged by over twenty years of war and conflict. Their task was double: help the Afghans establish a central government freed from any compromise with the Taliban, Al Qaida or any other terrorist movement, and participate in rebuilding the country and pursue the insurgents that were vastly spread out after the initial operations, taking refuge in zones that were difficult to access or in neighbouring countries. This is a colossal task for a country of 30 million inhabitants and a greater surface area than that of France. From a few thousand men in December 2001, the allied forces reached 140,000 men in May 2011. 100,000 of these troops were American soldiers, and 4,000 were French. Their task was often described as a counter-insurrection operation, defined by NATO and the French Joint Forces Centre for Concept Development, Doctrine and Experimentation (CICDE) as “any political, economic, social, military, legal and psychological activities, institutional and otherwise, necessary to neutralise an insurrection and address the main areas of dissatisfaction of the population”.<sup>1</sup>

The western forces had not been confronted with this type of conflict since Britain and France’s decolonisation wars and the Vietnam War for the Americans. Akin to Spencer Johnson’s characters in “Who Moved My Cheese?” the allied forces committed earnestly to the task of dealing with the new types of operations, so much so that the Afghan theatre was referred to as a testing ground for the art of modern operations. This versatility was a new opportunity to study a concept introduced by Barry Posen when he examined the military innovation process in his groundbreaking work on *The Sources of Military Doctrine (1984)*. Recently, British and American academics, such as Theo Farrell who had already studied the origins of military innovation, have grown interested in the adaptation of the allied forces in the Afghan conflict during the “stabilisation” phase. This work, structured on the experiences of NATO’s national contingents and the Taliban, provides an important first approach to a question that will undoubtedly be at the root of many studies in the future.<sup>2</sup> This strategic research paper will look at the allied forces adaptation during counter-insurrection operations in Afghanistan from a slightly different perspective, as it focuses on the adaptation of the French Air Force to the conditions of the Afghan conflict. It will first discuss the concept of military adaptation in the scientific literature available, followed by the adaptation of the Air Force to the Afghan conflict, and lastly, the factors that encouraged or hampered this adaptation process.

## THE CONCEPT OF MILITARY ADAPTATION

In 2006, Adam Grissom of Rand Corporation produced groundbreaking theoretical research on the concepts of military innovation and adaptation.<sup>3</sup> His work was based on the distinction made in 2002 by Theo Farrell and Terry Terriff, who stated that “innovation involves the development of new military technology, tactics, strategies and structures” while “adaptation involves the adjusting of existing military assets and methods”. In his 2013 publication, Theo Farrell specifies that military adaptation is “change to strategy, force generation and/or military planning and operations in response to operational challenges and campaign pressures”.<sup>4</sup> In most cases, military adaptation takes place with the objective of improving the performance of the military engagement, but it can sometimes be a response to an external or internal policy requirement by the engaged states. As illustrated in the table devised by Theo Farrell, the distinction between adaptation and innovation is mainly a difference in the intensity of the action rather than the addition of new

1. Contre-insurrection (COIN), DIA-3.4.4(A)1\_COIN, n° 064/DEF/CICDE/NP, 15 April 2013, p. 15.

2. Theo Farrell *et al.*, *Military Adaptation in Afghanistan*, Stanford University Press, 2013. There is no chapter on the French forces. We can read about the land forces in Stéphane Taillat, “National Traditions and International Context: French Adaptation to Counterinsurgency in the 21<sup>st</sup> Century”, *Security Challenges*, 6:1, Autumn 2010, p. 85-96. For French land aspects, see also: Michel Goya and Camille Sicourmat (dir.), *L’académie de la boue. Regards croisés sur l’apprentissage des forces armées*, Laboratoire de l’IRSEM no. 10, 2012, and in particular the article by Camille Sicourmat, “L’adaptation des forces terrestres françaises au théâtre afghan 2008-2011”, p. 51-57. On Iraq and the adaptation of the US Army, see Chad C. Serena, *A Revolution in Military Adaptation*, Georgetown University Press, 2011.

3. Adam Grissom, “The Future of Military Innovation Studies”, *The Journal of Strategic Studies*, 29:5, October 2006, p. 905-934. Article translated and updated in Stéphane Taillat *et al.*, *Guerre et stratégie. Approches et concepts*, PUF, 2014, p. 351-377.

4. Theo Farrell, “Introduction: military adaptation in war”, in Theo Farrell *et al.*, *op. cit.*, p. 2.



## FRENCH AIR FORCE ADAPTATION TO THE AFGHAN CONFLICT

Based on this table, we can look at the ways and processes used by the French Air Force to adapt to counter-insurrection operations conducted in Afghanistan alongside the alliance led by the American forces and NATO.

At the strategic level, first of all, the air force enabled the political power to adapt to the unique conditions of the Afghan conflict. This is especially true for the first phase of the conflict. In the wake of the terrorist attacks of September 2001, France made the decision to provide diplomatic support to the United States in international fora and engage its armed forces alongside the Americans to rid Afghanistan of the terrorist groups that established themselves there and which were prospering in the shadow of the Taliban regime. However, while France was intent on showing solidarity with its greatest ally, it was wary of a hidden agenda and committed its forces with caution within clearly defined tasks, remaining in charge of its military assets. Furthermore, the French President believed that France had no strategic interests to defend in Afghanistan. These political considerations shaped the nature of the French military engagement. The only forces deployed were those which were the easiest to withdraw (ships, planes and special forces), that would leave the lightest footprint. In this context, the air force played an essential role in adapting the French engagement to the Afghan theatre. The first forces deployed on the theatre were the Transall C-160 Gabriel and Mirage IVP planes. These were followed by aircraft carriers, Transalls and Mirage 2000Ds. At the end of the offensive phase, France decided to take part in the stabilisation phase under the aegis of the UN, deploying ground forces in Kabul. French personnel then evolved, not according to France's own interests in Afghanistan, which remained "non-strategic", but according to France's interest in NATO, which committed to the Afghan conflict at the end of 2003. As the operation evolved, the manner in which the air force was deployed was no different to that of the other forces. When six Mirage planes were deployed in Dushanbe in October 2005, it was to provide air support to the French special forces deployed since July 2003 as part of the Task Group Ares in Kandahar Province. Air support was deployed along the same lines as the land forces deployment for ISAF, or in a bilateral context.

Another example of adaptation at the strategic level is the Rafale deployment in Afghanistan. The Rafale entered operational service in the French Air Force in June 2006. The programme was a major operational challenge for the Air Force and a considerable financial challenge for the Ministry of Defence. Pilots were eager – even if the model in service suffered from certain limitations – to test the most modern platform in their fleet in the demanding conditions of the Afghan operations. However, NATO needed extra fighter jets for the extension of its mission in the south following the North Atlantic Council's decision of December 2005 (phase 3). In May 2006, the Alliance air forces performed 780 sorties in support of ground troops; a year later this figure reached 1,480. The Rafale, compared to the Mirage 2000D, has far superior payload capacity and flight range, two features that hamper French planes when compared to the other planes of the Alliance. Deployment of the Rafale ensured the needs of the alliance in terms of airpower capacity reinforcement on the theatre were met. The deployment in Afghanistan of Dassault's latest combat plane helped boost the sales campaign, as sales contracts depended on the programme's success. However, a number of sales contracts fell through during this period (with the Netherlands and South Korea in 2002 and Singapore in 2005) and negotiations for a large contract of 18 planes is currently underway with Morocco. The negotiators need the planes to be "combat proven" to boost their sales pitch and high level French authorities are eager to provide their buyers with it. In November 2006, the decision to deploy the Rafale was in response to a number of factors and therefore was an adaptation at the strategic level.

At the theatre command level, the rules of engagement are an excellent example of the adaptation of the Air Force to the characteristics of the mission. In the combat against the Afghan insurgents, the Air Force was mainly employed for transport or intelligence missions. Only one third of the total number of sorties were to provide air support. However, these played an essential role in the counter-insurrection combat. In 2005, French planes were mainly used for the French forces, and the rules of engagement (ROE) did not cause any real issues. From 2006, when the Mirage planes began to be used in support of foreign forces, the ROE became a key factor for incorporating French planes in the alliance. In September 2006, in order to limit the risk of collateral damage, the French Chief of Staff of the Armed Forces drafted stricter rules which most significantly forbid French planes to drop bombs in urban areas, except when the forward air controller was French and could ensure no civilian risked being hit by an air strike. However, these rules were too restrictive to apply on the ground. Occasionally, they prevented French airplanes from effectively carrying

out their tasks and thus affected the credibility of the French forces engaged to assist the alliance. After several reports from deployed units, the rules of engagement for French fighter planes were made more flexible in October 2006.<sup>8</sup>

The last level of adaptation is at the tactical level. We shall take as an example the adaptation of pilots to the specificities of air support during the Afghanistan campaign.<sup>9</sup> This was of course well-known, and Air Force squadrons had implemented it in the past, in particular during the conflict in former Yugoslavia. It evolved very rapidly, however, on the Afghan theatre, firstly because the ground forces desperately needed it and secondly because the technical improvement meant new procedures could be implemented. In 2002, the first Mirage 2000D planes deployed were rapidly incorporated into the alliance forces and participated without restrictions in Operation Anaconda. But in 2005, when they returned to the Afghan theatre, their equipment seemed ill-adapted to the standards required by the alliance led by the Americans to provide close air support to ground troops. This mission required perfect coordination between the crews and the forces receiving support in order to avoid friendly fire and limit collateral damage. Communication assets of the highest quality and which were perfectly secure were required, along with technology to exchange tactical information on the position of friendly forces, targets, etc. However, such technology evolved rapidly in Afghanistan, partly because the U.S and Britain launched Operation Iraqi Freedom in 2003, which required perfect coordination. In September 2005, a Mirage 2000D was refused permission to drop bombs on a target on the ground designated by a Joint Terminal Attack Controller (JTAC) because the pilot had no encrypted Secure Voice radio, but a HaveQuick frequency-hopping radio to communicate with troops on the ground.<sup>10</sup> The performance of the French pilots and their credibility within the alliance were doubted because of this missing asset, but also due to other factors such as the lack of Rover, efficient pod systems and uncertainty among the French crews returning to the theatre without being perfectly familiar with the Tactics, Techniques and Procedures (TTPs). These shortcomings were rapidly addressed, and for Operation Serpentine II which began in May 2006, the three Mirage 2000D planes sent to Dushanbe in Tajikistan were equipped with encrypted radio systems (type KY-58) in line with American standards.<sup>11</sup>

## FACTORS OF ADAPTATION OF THE AIR FORCES

These examples, taken from the French Air Force's engagement at different levels, illustrate their adaptation to the specificities of the Afghan conflict. However, while the various Air Force detachments deployed fulfilled their mission perfectly, certain shortcomings hampered their operational performance. We can therefore identify the factors that ensured the rapid adaptation of the French units and those which, conversely, slowed the process in order to determine, through an approach similar to John Nagl's in his now very well-known study, if the Air Force may be categorised as a "learning organisation" or a "slow learner".<sup>12</sup>

Theo Farrell sets out two main factors: the operational challenge and the appearance of new technology. In the case of the French Air Force in Afghanistan, the first is the reason for much of the adaptation. In October 2004, the Mirage F-1 planes were deployed in Dushanbe to support the French special forces detachment that were operating since August 2003 in Nangahar Province in south-east Afghanistan and which was lacking intelligence. Drones were deployed under the pressure of operations following the ambush in Uzbeen in August 2008. However, as for the second factor, as there was no threat of air attack and a low risk of surface-to-air attacks, there were no air dialectics with the adversary and therefore no adaptation to a threat – comparable to that posed by IEDs for the land forces - which did not evolve and remained quite low-risk for pilots. The appearance of new technology is certainly a powerful factor for adaptation, but it is not driven by dialectics with the adversary, rather in seeking greater operational performance.

A third factor may be added to those identified by Farrell as regards the French forces and specifically war conducted by an alliance, which is interoperability. Much adaptation is required – such as encrypted radios and the installation of ROVER air-to-ground data links – to allow the French forces to continue to operate at the same level as the American and British forces. This equipment was sometimes introduced to the detriment of French standards, and while other

8. Interviews with General Henri Bentegeat, 27 January 2012, and Colonel Laurent Aubigny, 13 May 2015.

9. For an example of tactical adaptation, see Philippe Gras, "L'adaptation tactique de l'armée de l'air et la guerre d'Indochine (1945-1954)", *Matériaux pour l'histoire de notre temps*, 1992, no. 29, p. 17-23. For a remarkable insight into air operations in Afghanistan, see Marc Scheffler, *La Guerre vue du ciel. Les combats d'un pilote de Mirage 2000D*, Nimrod, 2013.

10. Bernard Bombeau, "Imbroglie dans le ciel Afghan", *Air et Cosmos*, no. 1999, 30 September 2005, p. 35.

11. Bernard Bombeau, "Mirage de retour à Douchanbe", *Air et Cosmos*, no. 2027, 21 April 2006, p. 39.

12. John Nagl, *Learning to eat Soup with a knife: counterinsurgency Lessons from Malaya and Vietnam*, University of Chicago press, 2002.

technical solutions using equipment designed and/or produced in France were possible (the French Scarabee, for example, for air-to-ground data links is a competitor of the American Rover). The need for interoperability also comes into play in the field of command and control of planes and in TTPs with, for example, the development of an airdrop technique at high altitude and low opening to resupply forces on the ground with high levels of precision.

Amongst the secondary factors are domestic politics, alliance politics and strategic culture, which play an important role mainly in setting out the ROEs for the air forces. For the French Air Force, French rules provide a way to develop or to restrict French participation in alliance operations in accordance with the degree of national adhesion to the policy conducted by the U.S.

If the Air Force was unable to adapt perfectly to counter-insurrection warfare conducted in Afghanistan, it is due to a number of technical limitations such as the quality of sensors (Atlis or PDLCT pods), the narrow selection of weapons – despite the introduction of the GPS-guided GBU-49 into the Mirage 2000D arsenal – or radio link problems with the ground. Due to budgetary constraints, a certain number of decisions were made that favoured the development of new equipment, in particular for the Rafale with the AASM (dual mode laser and GPS-guided bomb) for example, rather than adapting older platforms such as the Mirage 2000D, which could receive weapons adapted to counter-insurrection operations such as guns, rockets or less powerful armament such as a 250 kg bomb. This capacity for evolution in its equipment is a key factor in the adaptation of the air forces. A fourth main factor should be added to those identified by Theo Farrell, who limited his study to the land forces, for whom technology plays a much less important role: the capacity for technological evolution of its equipment.

This last variable, however, is closely related to the level of resources granted by the political authority. However, governments are only marginally interested in the issue of adaptation of equipment to the mission, which is seen as a purely military issue. Frans Osinga and James A. Russel show that the various members of the alliance limit their discussion to the level of the overall engagement, both in terms of personnel and equipment, but spare little thought for the operational performance of their armed forces, which they see as the responsibility of NATO or the U.S.<sup>13</sup> The equipment issue is only taken seriously by the political authority when it is likely to have an overall effect on the success or failure of the mission, or when it touches on the relationship within the alliance, or when it considerably affects the security of their contingent. Stephen M. Saideman shows that the Canadian government invested in Chinook transport helicopters to reduce Canadian losses during transport across land.<sup>14</sup> The relative disinterest shown by the political authority in matters related to high-tech equipment, a key factor for the air force, is likely to weaken the adaptation capacity of the air forces to new forms of conflict, and much more so than the land forces. Inversely, it appears that adaptation at the operational and strategic levels of the air force is much easier, as it is more “politically malleable”.

13. Frans Osinga and James A. Russell, “Conclusion”, in Theo Farrell *et al*, *op. cit.*, p. 310-311.

14. Stephan M. Saideman, “Canadian Forces in Afghanistan”, in Theo Farrell *et al*, *op. cit.*, p. 224.

Jérôme DE LESPINOIS is a Lieutenant Colonel in the French Air Force and holds a doctorate in history from Paris-Sorbonne University. Since 2013, he has been appointed to the Institute for Strategic Research (IRSEM). Prior to joining IRSEM, he held both teaching and research positions at the Sorbonne University (1996-2005), at the Air Force Historical Service (2002-2004), at the Saint-Cyr Foundation (2009-2010), at the Strategic Aerospace Study Center of the French Air Force (2004-2009 and 2010-2013), at the Ministry of Foreign Affairs where he collaborated in the publication of French diplomatic documents (2002-2013), and at the Practical School of Advanced Studies (EPHE) since 2008, where he is a senior lecturer. He is also an associate member at UMR-Sorbonne - Identities, International Relations and Civilizations of Europe (SIRICE), secretary general of the Comparative Strategy Institute (ISC), and member of the Air and Space Academy (AAE). His research focuses on theoretical strategy, and air force, spatial, nuclear and cyber issues.

Contact: [jerome.de-lespinois@defense.gouv.fr](mailto:jerome.de-lespinois@defense.gouv.fr)