Operation SERVAL: The Air Power Lessons of France's Intervention in Mali

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This article looks at the shifting of the West's military posture away from the enduring campaigns of the last decade and towards contingency, using the recent French-led intervention in Mali as a case study. Against a backdrop of popular and political reluctance to risk large numbers of ground troops in potentially volatile and protracted conflicts, Op SERVAL saw the French take a different approach, substituting mass with agility and tempo and with air power taking a leading role. The implications for the future use of air power are analysed below with important lessons for UK Defence made evident.

Introduction

The UK's military posture is shifting from conducting enduring campaigns to preparing for contingent operations that, by definition, will be difficult to anticipate or predict. Despite financial austerity, our national policy is to continue to intervene actively and on a global basis when we consider our national interests are at stake - but invariably within the framework of a coalition or alliance.[1] In the past, the onus had been on the US to head the military response to developing crises, but President Obama's strategic pivot towards Asia-Pacific means that states such as France and the UK must expect to play a greater leadership role in operations on the fringes of Europe or in Africa.[2] This may involve acting as the framework nation for multilateral operations (either under the auspices of NATO or within more disparate alliances and coalitions), or taking the lead in the initial stages of a contingency while the international community is considering and organising its response - a process that may otherwise be too slow and protracted to resolve a crisis before it spirals out of control.[3]

However, while the UK's policy aspiration remains interventionist, the sense of strategic fatigue induced by the campaigns in Afghanistan and Iraq has arguably sapped the West's political will to commit 'boots on the ground' and, more fundamentally, skewed political perceptions of the value of military force as a useful lever of national power.[4] Within this context, 'light-footprint' military operations - built around air, sea and Special Forces capabilities supporting regional or indigenous forces providing the combat mass on the ground – look like an increasingly attractive option. This scale of effort may now represent the threshold of 'what the market will bear' in terms of political commitment to interventions that may be considered by the public as discretionary rather than essential.

What role can air power play in this sort of environment? An early indication was provided by the campaign in Libya in 2011. Here, the UK and France used their air forces to provide much of the high-end combat capability (albeit depending primarily on US enablers) in what eventually became a NATO operation, but where the main effort on the ground was provided by indigenous anti-regime militia. Operation SERVAL - France's recent intervention in support of the government of Mali – arguably represents an even better illustration of the way that the agility, responsiveness and economy of effort provided by air power can be employed to exert the desired level of influence at a politically acceptable level of commitment. Consequently, this short paper draws on open source material to explore not only the air power lessons of SERVAL at the operational level, but also the broader relationship between air power, military strategy and national policy objectives.

The Crisis in Mali

In recent years, the Tuareg 'National Movement for Liberation of Azawad' (MNLA) has been conducting an insurgency in northern Mali. The failure of the Mali government to deal effectively with the MNLA eventually led to a coup in March 2012. With a weak interim government, three Islamist groups - 'Anser Dine', 'Al-Qaeda in Islamic Maghreb' and 'Movement

for One and Jihad in West Africa' – emerged in the ensuing instability to contest power. They quickly overran northern Mali, despite resistance from government forces and the largely secular Tuareg nationalists, who were also still fighting each other.[5] On 20 December 2012 the United Nations (UN) Security Council passed Resolution 2085, approving the formation of an African International Support Mission in Mali (AFISMA) to restore stability. The Economic Community of West Africa States (ECOWAS) and other African Union (AU) nations pledged to contribute troops to the mission. However, in January 2013 the militants launched an offensive to take southern Mali before AFISMA could deploy. This threatened thousands of entitled French citizens living in the capital, Bamako, and prompted the French

This map illustrates the furthest extent of the rebels' advance before French air attacks mounted from the Forward Operating Bases at Mopti Harbour and Sevare halted their offensive at Konna and Diabaly. Note the strategic scale and tempo involved; the campaign effectively ended after just 20 days with the recapture of Tessalit, some 1,200 km distant from the main Air Port of Disembarkation at Bamako. (Map source http://en.wikipedia.org/wiki/File:Northern_Mali_conflict.svg last accessed 27 November 2013; © Orionist / CC-BY-SA-3.0)

Defence Minister, Mr Jean Yves Le Drian, to announce on 10 January that France would mount a military intervention in support of the government of Mali. The immediate military aims of what became known as Operation SERVAL were twofold: first, to assist Mali forces in halting the militant offensive; and then to support AFISMA in recapturing northern Mali. The broader long-term policy aim was to 'secure the European neighbourhood' by 'giving Africa the tools to handle its own crises' through the reinforcement of African peacekeeping capabilities.[6]

France has longstanding national interests in Africa stemming from the colonial period, evident in over fifty military interventions since 1960. Despite President Hollande's electoral pledge to scale back involvement in *'Francafrique'*,[7] France maintains a significant level of engagement with francophone Africa. Consequently, much of the necessary enabling architecture for a military intervention, including some of the military force required, was already in place. There was an operational headquarters at Dakar in Senegal, a joint force air combat command at N'Djamena in Chad and a tactical HQ at Bamako in Mali, all connected by a secure communications network. Strategic Intelligence, Surveillance and Reconnaissance (ISR) was available on a daily basis from France's Helios satellite system, later supplemented by US space capabilities accessed through the Air Operations Centre in Ramstein in Germany.[8] Theatre ISR assets already in place included two Mirage F1-CRs and one Transall C-160 with a reconnaissance pod based at N'Djamena, two Harfang Unmanned Aerial Systems (UAS) at Niamey in Niger and two Atlantique II aircraft at Dakar in Senegal. In addition, France has developed and sustains a comprehensive network of long-serving Defence Attachés across West Africa. These officers were to play a key role during the crisis, facilitating and enabling military deployments, negotiating with and advising partners and allies, and developing and maintaining a high level of situational awareness as the operation unfolded at pace.[9] This combination of pre-existing assets meant that French forces benefited from a firm basis of understanding and familiarity from the outset of Operation SERVAL.

Campaign Chronology

The French Army's 'Cheetah Plan' was immediately activated to deploy high readiness forces (paratroopers, helicopters and mechanised units) to theatre.[10] Over 1,800 military personnel and their light armoured vehicles were deployed to Mali during the first week of the operation, from Chad, Burkina Faso and the Ivory Coast as well as metropolitan France. However, a lack of strategic air lift meant that capabilities had to be either leased commercially[11] or requested from allies to shift heavier cargo. The UK – now firmly linked to France by the 2010 Lancaster House military treaty – responded by mounting Operation NEWCOMBE to support her ally, making two C-17 Globemaster III heavy lift aircraft available to reinforce the air lift effort. Intra-theatre air mobility was also in short supply, resulting in further requests for NATO assistance. Eventually the US, Canada, Denmark, Belgium, Italy, Spain and Germany contributed transport aircraft and other non-combat capabilities to support the operation. The benign air environment allowed an uninterrupted military build-up to be carried out at Bamako, which was initially 400 km south of the militant advance. Forward operating bases were established much closer to the front-line, principally at Mopti Harbour on the Niger and at Sevare airport.

The French exploited the speed and responsiveness of air power to buy time while they deployed ground forces. The first priority was to stop the militants from reaching Bamako. Their offensive was split into two arms, totalling about 1,200 fighters in over 200 vehicles, and aimed to envelop the capital in a pincer movement. Following the coup, France had discreetly pre-positioned SA 342M Gazelle light utility helicopters at Ouagadougou in neighbouring Burkina Faso.[12] These aircraft were moved forward to Sevare when Operation SERVAL was implemented. On 11 January, four helicopters attacked the southern militant column near Konna, destroying the lead vehicles and forcing the rest to withdraw. There is a trade-off between simple equipment that is cheap enough to pre-position in an area of potential interest on a long-term basis, and scarcer, more sophisticated aircraft that must be retained centrally and deployed in response to the operational need. The Gazelles based in theatre were simple and effective enough, but relatively vulnerable. A single round of small-arms fire hit the pilot of one helicopter and severed an artery in his leg. Although he and his co-pilot brought the helicopter back to Sevare, the pilot later died of his wounds. A second Gazelle was also forced down by small-arms fire, but the crew was rescued and the damaged helicopter destroyed by another Gazelle to prevent it falling into the hands of the militants.

The helicopter attack successfully reduced the momentum of the militant advance, but highlighted the need for greater stand-off capability in theatre; the rebels were well armed, not least because weapons were freely available in the region in the aftermath of the Libya conflict. The militants fielded many 'technicals', pick-up trucks armed with heavy calibre weapons. These are a staple ingredient of African warfare and can generate considerable firepower. Consequently, more sophisticated EC 665 Tiger helicopter gunships were deployed as a priority, as their 30mm gun easily outranged the armament of most technicals.[13]

The Gazelles also lacked the range to engage the northern arm of the militant offensive from Sevare. Consequently, a night attack was launched by four Mirage 2000Ds, which halted the militant force near Diabaly. These aircraft were based at N'Djamena, over 2,000 km away, and needed two air-to-air refuelling brackets to carry out the mission. The reach of air power was further demonstrated on 13 January, when four Rafale fighters supported by two C-135 tankers flew 3,000 km from France across Algeria to attack logistics and vehicle parks in and around Gao with precision-guided weapons. The strike package then flew a further 1,690 km onto N'Djamena. Subsequently, air strikes were launched on a daily basis from N'Djamena, although tanker availability remained a limiting factor throughout the operation.

The overall military plan had emerged as 'block, drive and clear': stop the militant offensive, force them back and then secure territory and re-establish government control. By 15 January, sufficient French and Mali ground forces were available to start the second phase by attacking and defeating the enemy forces around Konna. However, the militants had resumed their advance in the north, so the main effort switched back to supporting the Malian forces defending Diabaly. Sixty strike, ten attack helicopter, forty ISR/tanker and thirty intra-theatre airlift sorties were flown during a week of concerted air-land operations. This stopped the

northern offensive in its tracks, enabling the build-up of land forces to continue to the point where the operation to retake northern Mali could begin. Preparations included forward-basing air assets at Bamako, to provide more responsive air support, while the ISR effort focused on building a comprehensive picture of militant activity, particularly in urban centres. This was supported by the deployment of the RAF's Airborne Stand-Off Radar System (ASTOR) to Dakar in late January. The Sentinel aircraft of No. 5 (AC) Squadron flew sixty-six sorties for 697 flying hours over the next 4 months.[14] The primary task was to provide a wide-area search capability in real time by monitoring pattern of life (principally by tracking road traffic with its synthetic aperture radar and ground moving target indication technology). However, ASTOR was also used to support more direct targeting by cross-cueing other assets onto individual points of interest for positive identification.[15] Meanwhile, Special Forces were infiltrated into the remote, northern mountain regions to locate militant strongholds and mark them for precision air attack using laser pointers.[16]

The Franco-Malian land offensive began on 26 January with the recapture of the strategically important town of Gao. Aerial reconnaissance was used extensively to generate the intelligence necessary to target precision air strikes, followed by persistent surveillance provided by a combination of UAS and Atlantique II aircraft. These shaping operations set the conditions for an air-dropped paratrooper assault on the local airport, accompanied by a simultaneous attack by mobile ground forces. The airborne and land forces linked up successfully and then quickly retook the urban areas. The success of this attack set the pattern for subsequent air-land operations. On 30 January, the AFISMA forces advancing from Niger joined up with French and Malian forces. The coalition of French and African forces, then liberated Timbuktu, Kidal and finally Tessalit in rapid succession. The conventional phase of the conflict was effectively over by 8 February.

The militants then switched to asymmetric tactics, including suicide bombing and hit-and-run raids against government buildings and supporters. The French-led coalition responded by mounting Operation PANTHER. Pattern-of-life surveillance was increased to locate hideouts, weapons and logistics caches and identify surviving militant leaders. The US increased its support with persistent ISR provided by Global Hawk and Predator UAS and EP-3 and other manned platforms. This allowed the *Armeé de l'Air* to concentrate on air strikes against militant targets. By April, the crisis had been stabilized and security was judged to be good enough for the process of re-establishing government control and rebuilding the Mali Armed Forces to begin. The French strategy is to withdraw progressively, handing over responsibility for security and stabilisation to a UN sponsored peace-keeping force drawn from ECOWAS and supported by a European Union mission to provide advice, mentoring and training. This includes a small UK military training team.

The conventional phase of the conflict was concluded in just 20 days of combat. The operation was often hard-fought in difficult conditions, but was conducted with striking economy of effort: under 4,000 French troops were eventually deployed in support of about 6,000

Malian troops and 3,000 AFMISA soldiers. They were faced by up to 12,000 Islamist fighters. Coalition losses were sustainable: seven French and about seventy Malian and AFMISA soldiers were killed in action, whereas about 625 militants are estimated to have died. Although it is too soon to judge the longer-term consequences for regional stability, Operation SERVAL met all of the political objectives that were initially set. The threat to Bamako was averted and northern Mali was secured in a rapid intervention at little cost. Although France's role was essential, the conditions have been established for ECOWAS to attempt to provide 'an African solution to an African problem'.[17]

Operational and Environmental Lessons

At the operational level, the major lessons of the campaign are unsurprising given the context of recent operations, but bear repeating. The majority relate to the provision and integration of the foundation enabling capabilities that glue a power projection intervention operation together: command and control in a joint air-land and *ad hoc* combined environment, including supplying liaison teams to AFISMA; the provision of timely intelligence; adequate, secure CIS to network scarce assets so they can be 'sweated' to maximise their value; and the provision of logistics support in a land-locked theatre where road transport is slow and difficult.

In any contingency, there will be a surge in demand for strategic ISR to build initial awareness as a crisis develops. France was able to act as a framework nation first and foremost because of her assured access to space-derived ISR from the Helios satellite system. Although this was later supplemented by US space capabilities, the message is clear: space will always be 'first on the scene'[18] and possessing a space-based ISR capability ensures that a state's particular strategic interests will be prioritised in a way that is simply not possible if, like the UK, access depends on allies' capabilities or commercial sources. Theatre ISR was also essential to generate detailed intelligence at the tactical level and, once again, demand outstripped supply comprehensively. This was also linked to the size of the theatre and scarcity of assets. Because the force-density ratio was so low, more effective integration was necessary to improve the effects chain response. In particular, better networking was required to make optimal use of the highest value assets, including tactical fighters, manned ISR, UAS, air tankers, air lift and maritime patrol aircraft. Finally, Operation SERVAL reinforced the lesson that tactical aircraft can provide responsive and effective long range strike support, although sortie rates will be determined by the availability of tanker support.[19]

France published the *livre blanc*, its strategic defence review, in late April 2013, and the lessons it learned are abundantly clear in the force structure recommendations for air capabilities.[20] Despite the austere financial environment, France seeks to boost investment in air-delivered power-projection capabilities in general and persistent ISR in particular. The impact of the 'air lift gap' on contingency planning is freely acknowledged, particularly where operations do not allow supply by sea or road.[21] Proposed new acquisitions include manned persistent ISR platforms and unmanned Predator UAS. The Rafale fighter aircraft, tanker/transport and

new tactical air lift acquisition programmes are all confirmed, although no increase in numbers is contemplated.

Wider lessons

While Operation SERVAL reveals and reinforces many enduring themes at the operational level, it also yields some broader lessons. Conceptually, UK doctrine increasingly theorizes about the value of forward engagement, including the importance of Permanent Joint Operating Bases and regional engagement forces. However, France has long since embraced this principle and put it into operational practice. In West Africa, the breadth and depth of the Defence Attaché network, the availability of established regional bases and the presence of limited forces in place (including pre-positioned equipment) all provided a firm foundation for intervention. Forward engagement enabled an immediate and effective response, based on familiarisation with the regional context backed by a deep level of understanding and operational experience acquired in-theatre over many years. It is therefore incumbent on the RAF to consider how it understands and develops the role that UK air power may play in a force posture based on forward engagement.

Perhaps more fundamentally, SERVAL also provides wider lessons about the utility of military force in the post-campaigning era. While France has a long tradition of using military force as a tool of national influence,[22] there is a perception that UK Defence has become unduly risk averse and bureaucratic; as General Sir Peter Wall, the outgoing Chief of the General Staff observed, this will inevitably inhibit our ability to provide agile military effects and exert the political influence we desire.[23] In comparison, Operation SERVAL demonstrated the French military's ability to respond to a political imperative for immediate action without agonising unduly about risk or the resilience of its logistic tail, and in the absence of a clearly defined strategic directive, at least in the initial stages of the intervention. In fact, this supported operational agility by offering the military considerable freedom of manoeuvre, allowing a cohesive, brigade-sized force to be formed from a mix of pre-positioned forces-in-place and rapid response, high readiness elements without arbitrary troop-number caps or other political constraints.[24]

However, the risks France accepted were mitigated by the measured judgement of the 'art of the possible' that was available because of the depth of understanding provided by long-term regional engagement. Nevertheless, familiar shortcomings in key, foundation enabling capabilities (particularly ISR and air lift) did emerge that required recourse to allies and partners. One of the pitfalls of depending on allies for access to capabilities – a position the UK also finds itself in - is the lack of assurance that they will be provided when most needed: reportedly the US turned down a French request for additional tanker support and also demanded payment to defray the costs of the C-17 support it provided, although this was later waived.[25]

Conclusion

Operation SERVAL tested the ability of France's military forces to support national policy objectives by projecting power at long range. The success of the operation in resolving

an unforeseen crisis quickly and effectively provides important lessons for UK Defence in general and the RAF in particular. The benefits of a policy of forward engagement as a basis for intervention are clear, as is the message that a measured and robust approach to risk underpins operational agility.

Although the air environment was benign, the experience of French air forces illustrates some of the challenges that the RAF can expect to face if the UK is required to act as a framework nation for initial crisis response operations in our 'near-abroad' around the fringes of Europe or in Africa. Air power played a leading role in Operation SERVAL in three ways. First, it provided the immediate response necessary to avert an impending disaster in the crucial first forty-eight hours by slowing the momentum of the militant offensive until ground forces could deploy in sufficient strength. This was accomplished by deployed air assets and, on occasion, by effects projected directly from metropolitan France. Second, air power shaped the battlespace. It enabled the timely deployment of high readiness forces to an operational theatre where road and sea transport was not feasible; and it generated the intelligence required to ensure tactical success through air and space-derived persistent ISR. Third and finally, air power played a critical role in the tightly integrated joint and combined air-land operations that brought the campaign to a swift conclusion, notably by providing overwhelming precision fires on demand.

Arguably, Operation SERVAL represents exactly the sort of model for Joint Expeditionary Force employment envisaged in forthcoming conceptual work. A small (brigade-sized) and agile Joint Force created momentum through tempo rather than mass, using high-end capabilities to support larger, indigenous coalition forces in achieving a decisive outcome on the ground. What is certain is that Operation SERVAL provides a compelling example of the relevance of air power's unique attributes and capabilities in the post-campaigning era of contingency. A French airman's perspective of the role of the *Armeé de l'Air* in Operation SERVAL is illuminating:

> *'The air force and "air power" are political tools. For our political leaders, the ability of what we call "first entry" is very important - if we intervene and have to take on responsibility.'*[26]

A senior RAF leader recently observed that we are prone to 'obsess about what we do rather than what we are for'.[27] Examining the part that air power played in delivering the political objectives that Operation SERVAL was designed to achieve helps us to understand much more clearly what an air force 'is for' in the contemporary operating environment.

Notes

[1] William Hague, Foreign Secretary, 'For the first time in decades our diplomatic reach will be extended not reduced', Parliamentary Announcement, 11 May 2011, **https://www.gov.uk/government/news/foreign-secretary-for-the-first-time-in-decades-our-diplomatic-reach-will-be-extended-not-reduced**, last accessed 12 August 2013.

[2] See 'Pivot to the Pacific – The Obama Administrations "rebalancing"', Congressional Research Service Paper 7-5700, 28 March 2012.
[3] JDP 0-30 *UK Air and Space Doctrine*, DCDC July 2013.
[4] 'Britain must avoid "withdrawal through fatigue" image over Afghan pull-out', *The Daily Telegraph*, 12 August 2013.
[5] *Pathfinder*, Issue 200, May 2013.
[6] Col. Marc Couruy (Head Africa Desk JHQ Paris and Special African Affairs Adviser to CHOD), presentation to ARRC Study day, 6 June 2013.
[7] http://www.rusi.org/analysis/commentary/ref:C50FE5E5B77B13/, last accessed 12 August 2013.
[8] Pathfinder.
[9] *Op Cit*, ARCC Study Day.
[10] *Op Cit*, Pathfinder.
[11] These included two commercial Antonov An-124 Condor heavy lift aircraft.
[12] 'Sand on their boots; the intervention in Mali', The Economist, Issue No.23, 26 January 2013.
[13] http://www.defensenews.com/article/20130121/DEFREG04/301210002/Early-Lessons-From-France-8217-s-Mali-Action-Emerge, last accessed 12 August 2013.
[14] Major Seymour Bailey, briefing at RAF Waddington International Air Show, 4 July 2013.
[15] http://www.flightglobal.com/news/articles/royal-air-force-lifts-lid-on-sentinels-role-in-mali-388092/, last accessed 12 August 2013.
[16] http://online.wsj.com/article/SB10001424127887324734904578239472166070626.html, last accessed 12 August 2013.
[17] *Op Cit*, The Economist.
[18] JDP 0-30.
[19] *Op Cit*, Pathfinder.
[20] http://www.defense.gouv.fr/actualites/articles/livre-blanc-2013, last accessed 12 August 2013.
[21] http://www.janes.com/article/10286/analysis-mali-intervention-highlights-france-s-strategic-airlift-gap, last accessed 12 August 2013.
[22] For example, the participation of Free French Forces in the D-Day landings had less to do with defeating the Wehrmacht than establishing France as an equal partner in establishing the post-War world order.
[23] 'Wars of the future will be short, sharp and bloody says army chief', *Daily Telegraph*, 27 June 2013.
[24] Olivier Tramond, 'Early Lessons from France's Operation SERVAL in Mali', *Army* 63.6, June 2013, pp 40-43.
[25] *Op Cit*, The Economist.
[26] Quoted in *Pathfinder* Issue 200, May 2013.
[27] CAS Fellowship Forum, RCDS, June 2013.