Ju-87 Stuka aircraft during the Blitzkrieg

The Battle of France, May 1940: Enduring, combined and joint lessons

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For the RAF the Meuse that day was an unimaginable hell, a real Valley of Death from which few returned.[1]

Introduction

Although Horne was describing the RAF's experiences over the Meuse bridgehead on 14 May 1940, he neatly captures the dislocation, shock and confusion felt by the Allied armies and air forces throughout the Battle of France. That this was a 'hell' is indisputable, the RAF losing 44 aircraft from 72 sorties on that day alone, a loss rate of 62%.[2] But that this was 'unimaginable' implies that either the German combined arms offensive represented an approach to operations that was so revolutionary that it was unforeseeable, or that the Allies simply did not prepare for a method of warfare that prudent analysis would have led them to expect. It will be argued that far from being unimaginable, the hell of what became known as *blitzkrieg* was essentially evolutionary, and therefore entirely predictable. That the Allies did not formulate appropriate strategies to deal with it indicates that it was their failures, rather than their opponent's acumen, that led to German tactical and operational success.

This paper will begin by analysing the development of the strategies and plans of the combatants. It will be demonstrated that in contrast to Germany's incremental development of a flexible, pragmatic 'way of war', context and culture pushed both Allies towards rigid, single-service, doctrines that they were unwilling to revise, despite the evidence offered by events such as the Spanish Civil War. The result was that the German military was able to fight a coordinated and integrated joint campaign, while the Allies' intellectual and conceptual failings, coupled to a complex and sclerotic command structure, set the conditions for their defeat. Next, a brief campaign narrative will be used to consider the execution of joint and combined operations in practice, particularly with reference to the decisive act at the river Meuse in mid-May. Finally, the contemporaneous analysis of the campaign will be critically assessed and enduring lessons suggested. The shattering defeat inflicted by a German military on Allied forces that were broadly comparable in size and quality of equipment indicates that achieving successful combined and joint effect was problematic in 1940; recent experience suggests that this remains the case in current operations.[3] Consequently, it will be argued that as a coalition campaign involving significant air-land integration, the Battle of France left a legacy of lessons that still have resonance today.

France

The traumatic effects on French politics and society of the pyrrhic victory of 1918 have been well documented.[4] A key consequence was the declining birth-rate, stemming from disproportionately high wartime losses and resulting in the 'hollow classes', so that whereas Germany had 464,000 men available for conscription from the class of 1915, France had just 184,000.[5] Recognising their relative weakness, French politicians attempted to deter the threat of a resurgent Germany by establishing a system of alliances, but this policy had failed by the late thirties. Negotiations with the Soviet Union were unsuccessful, and the 'Little Entente', composed of the central and eastern European states established at Versailles, disintegrated in the face of aggressive German revisionism.

While her grand strategy was ultimately a failure, in parallel France had also sought to develop a military strategy to meet the two overriding priorities of husbanding her limited manpower and keeping French soil sacred, to avoid any repetition of the devastation of the Great War. To meet these aims, the Maginot Line system of fortifications was constructed to establish a defensible eastern frontier. This shaped French force structure and dominated military thought, codifying a linear doctrine of the 'continuous front', with little conception of defence in depth and, because of the financial strain it imposed, leaving few resources available to modernise elsewhere, so 'the Army tended to rest content with the techniques and equipment of 1918'.[6] For example, despite the availability of radios and the proven vulnerability of land-lines, the telephone was retained as the prime means of communication, and mechanised warfare was not enthusiastically embraced. The few available mobile forces were largely employed as 'interval troops' guarding gaps in the Line, so there was no strategic reserve or *masse de manoeuvre*, and it was this that was the critical shortcoming of the Maginot Line, rather than its capabilities *per se*. Tactically, it was to stand up well to assault in 1940, but it was not a *place des armées*,[7] so could be easily outflanked and therefore rendered irrelevant operationally. More importantly, it engendered a 'Maginot mentality', a defensive and reactive military mindset that surrendered the initiative, in expectation that war in 1940 would follow the same pattern, at the same tempo, as war in 1914-1918.

The Line stopped at the Belgium border, primarily as it was deemed politically unacceptable to build a defensive position that excluded a then close ally, but also because funds had begun to run out and the boggy terrain was unsuitable for construction of deep fortification. Instead, a coordinated defence was planned with the Belgian Army, in the expectation that the ensuing stalemate would buy time to establish the Allied economies on a proper war footing, for strategic bombing of Germany to take effect and for potential allies, particularly the USA, to be rallied to the cause. However, this strategy was undermined by Belgium's declaration of strict neutrality in 1936, which meant a forward defence could not be prepared in advance. Gamelin, the French Commander, was 'simply old, and what was worse, tired by age'.[8] Lacking the flexibility of mind to adapt to changing circumstances, he was guilty of 'perseveration,' the inclination not to revise earlier judgements in the light of later events,[9] by continuing to plan an advance into Belgium in the event of hostilities, even though this now risked both an encounter battle, for which the French army was ill-prepared, and the prior committal of the majority of his very limited manoeuvre reserves at the northern extremity of the theatre of operations, limiting his ability to respond to events elsewhere.

The flaws in French grand and military strategy were compounded by the adoption of a Byzantine command structure, which as Horne notes, was 'anomalous and hardly satisfactory'.[10] The limits of responsibility were opaque, with three tiers of command above army group level, established in geographically separate headquarters. Gamelin had to go through his deputy, Georges, when issuing orders to the North-East Front, while GHQ Allied Land Forces, under Doumenec, acted

as an intermediary. Effective command and control was further hampered by the poor relations between commanders, with the mutual antipathy between Gamelin and Georges creating a particularly toxic atmosphere. Gamelin refused to use radio, so command communications were dependent on land-lines, motorcycle couriers or personal visits and thus peculiarly vulnerable to delay and dislocation. Coalition command arrangements were also vague. Although Gort's British Expeditionary Force (BEF) was included in the Northern Army Group, he took his orders not from Bilotte, the Army Group Commander, but direct from Gamelin through Georges. Furthermore, he had the right to appeal to the British Government 'before executing any order likely to imperil the Field Force',[11] so national 'red cards', caveats on the use of forces in coalition warfare, are by no means a new phenomenon.

This complexity was reflected in joint command arrangements. Under General Vuillemin, 'an elderly bomber pilot not over-endowed with dynamism',[12] Têtu, the chief of Air Cooperation Forces, coordinated air activity on the North-East Front, but his responsibilities overlapped those of the zone commanders, such as d'Astier, who paralleled the army groups. Although *L'Armée de l'Air* had achieved independence in 1933, it remained a junior partner of the Army, with an emphasis on reconnaissance and the screening of ground forces. The requirement for local air superiority over the battlefield had been recognised, and an expanded fighter-force was the main objective of the 'Plan V' re-equipment programme, but this was still incomplete in 1940. The doctrinal immaturity of *L'Armée de l'Air*'s concept of operations was apparent in the way 'penny packets' of aircraft were parcelled out amongst army formations to provide localised air cover across the front. In practice, this meant that individual army group commanders were unable to obtain a concentration of air power where and when they wanted. Borne out of the mutual distrust between air and land components in the interwar period, air force doctrine and command and control led to a fragmented approach that proved fatal in the face of the *Luftwaffe*'s concentrated employment of air power.[13]

Britain

The British response to the Great War was the policy of 'limited liability',[14] so that as late as May 1938, the Chief of Imperial Staff could write: 'Never again shall we even contemplate a Force for a foreign country. Our contribution is to be the Navy and the RAF.'[15] The RAF had formulated a doctrine of strategic bombing to ensure its independence as a separate service in an environment of inter-service rivalry and financial stringency, validated by its experiences of air control and colonial policing. The Air Staff maintained that a future war would be decided by air strikes before ground operations became necessary, bombing being widely perceived as a potentially quicker and more humane method of waging war than a return to the industrialised total warfare of 1914-18. Consequently, few resources were allocated to army cooperation, which became marginalised as a discipline and disregarded as a specialisation by ambitious officers in both services. Indicatively, the Army's 'Notes on Lessons of the Great War' were not published until 1934, and contained only one sentence on the subject of close air support (CAS), commenting unenthusiastically that 'low

flying assault fighters as maintained by some foreign countries may be worth consideration'.[16] The RAF's views regarding CAS had been coloured by the high attrition rates suffered in the closing months of 1918 and Newall, the incoming Chief of Air Staff, stated in 1937: 'close-support tactics were a gross misuse of air forces'.[17] Both the RAF and the Army had cultural traditions of anti-intellectualism that were so entrenched that they had become almost institutionalised,[18] so it is hardly surprising that the value of air support was not reassessed in the light of the Spanish Civil War or the Polish campaign.[19] Where the evidence was considered at all, it was used selectively to reinforce existing preconceptions, so the devastation of Guernica was seen as validating 'morale bombing' as the prime means for attacking an enemy's will to fight, while the effectiveness of the German air-land technique was disregarded.

Following Germany's invasion of Czechoslovakia in 1939, the British government reluctantly accepted the inevitability of sending a land force to France. The War Office pressed for the BEF to be supported by a large army-cooperation element, but the Air Staff rejected this on the basis that the ground battle could best be influenced by bombing German industry in the Ruhr, speculating that this would also draw German air assets away from the battlefield. Accordingly, the allocation of dedicated air support to the BEF was very modest, the Air Component comprising just thirteen squadrons of fighters and reconnaissance aircraft. The Advanced Air Striking Force (AASF) was also deployed to France, but as an outpost of Bomber Command rather than to support the army,[20] primarily so its short range bombers could reach targets in Germany. Eventually, a British Air Forces in France Command was formed to coordinate the activities of the two RAF elements, but as neither was a balanced, composite force, the Air Component had to rely on the AASF for bombing support and the AASF on *L'Armée de l'Air* for the fighter escort that could have been provided by the Air Component, had the two RAF elements been properly integrated. Events were to prove that the fragile support arrangement with the French was unreliable, and the organisational structure meant that the only working air-land interface was in Whitehall, rather than at a joint headquarters in theatre. Consequently, army staff officers often had to telephone London to request air support[21] and the twin pillars of effective air-land integration, timeliness and assurance, were both compromised. For example, the RAF was requested to attack armoured columns approaching the Canal du Nord on 20 May, but the Germans had long since crossed when the aircraft arrived on scene four hours later.[22]

Germany

Following their defeat, the Germans studied the lessons of the First World War rigorously, developing armoured tactics in the interwar years that were a conscious adaptation to technology of the conceptual framework established in 1917-18. This was based on a combined-arms battle, including airpower and resting on fire and manoeuvre, decentralised decision-making and relentless exploitation. Thus 'for French and British officers in summer 1940, the Germans had clearly developed a revolutionary style of war, but to German officers the secret of success was the careful evolutionary development of concepts that had their origins in the

battles of the First World War'.[23] This flexible approach was shared by the high quality army officers who had transferred into the nascent *Luftwaffe* and were established in command by the outbreak of war. Spared the bitter inter-service fight for survival endured by the RAF in Britain, which had bred mutual distrust and enmity, the common roots and staff education of *Wehrmacht* and *Luftwaffe* senior ranks provided a shared understanding of the operational method.

The *Luftwaffe* has been characterised as a purely tactical air arm, but this is something of a myth. As an independent air force, the *Luftwaffe* had always aspired to act strategically, but cost constraints and limited industrial capacity led to it being equipped with short and medium range bombers,[24] and the death of General Wever in a flying accident robbed it of its greatest advocate of bombing for strategic effect. Accordingly, it balanced ends, ways and means by pragmatically accepting the need to temper its ambition, establishing a concept of support for joint operations that could be delivered within the limited means available. In contrast, the RAF doggedly held true to its vision of independent strategic action, even when it patently lacked the means to achieve it. While the *Luftwaffe*'s flexible approach was critical in delivering short-term success up to the operational level, its lack of long-term planning meant that it failed strategically, while the RAF, and later the US Army Air Forces, were ultimately able to contribute decisively. In its misconception that the sum of operational efficacy would somehow inevitably equal strategic success, the *Luftwaffe* was entirely symptomatic of the weaknesses of wider German military thought.

Luftwaffe doctrine was enshrined in the 'Operational Air War', published in 1935.[25] With Clausewitzian focus, it postulated that an enemy state could best be defeated by the destruction of its armed forces, and emphasised the necessity for the three services to work together to achieve this. However, while the army and navy would be supported as necessary, direct action would still be taken against the centres of an enemy's power when possible. In practice, this resulted in a broad-ranging and fluid concept of operations that was refined continuously in the light of empirical experience. In the Spanish Civil War, the *Condor Legion* established the requirements for effective direct air support: the best possible air-ground communications; the necessity for *Fliegerverbindungsoffiziere* or specialist liaison officers; the provision of suitable aircraft and weaponry; dedicated training in CAS bombing and targeting techniques; and the crucial and overriding requirement for the closest and most cordial inter-service cooperation. However, the Chief of Staff, Jeschonnek, emphasised the vulnerability of CAS aircraft and was concerned about the attrition rates that could be expected, particularly if air superiority was not assured. He ordered that CAS was only to be undertaken where there was likely to be a high pay-off, so despite the popular perception of the *Luftwaffe* being used as aerial artillery, direct air support for ground forces was a comparative rarity in the Polish campaign, and this remained the case in France.[26]

The campaign

The original German campaign-plan for the attack on the West, *Fall Gelb,* was 'manifestly a bad plan',[27] reflecting the lack of enthusiasm felt by a General

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Staff concerned that Germany's own preparations were incomplete. However, delays to the start date permitted the plan to be recast, and Manstein's proposal, the '*Sichelschnitt*' or sickle-cut, was adopted. Recognising the strength of the Maginot Line in the south and realising that the Allies would probably anticipate a main effort in Belgium, a 'matador's cloak' deception was employed to reinforce this expectation, while the sword thrust was delivered through the supposedly impassable Ardennes into the weakly held French centre at Sedan. This was the *schwerpunkt*, where Guderian's 'Army Group A' massed seven of Germany's ten *Panzer* divisions. After rupturing the French line, the Germans were to race to the coast, splitting the Allied forces in two before defeating them in detail in the second phase of the campaign.

The Battle of France was characterised by the *Wehrmacht* and *Luftwaffe*'s ability to use effective joint tactical doctrine to concentrate force, whereas the Allies' unwieldy command structure and single-service concept of operations meant that their response was piecemeal, reactive and rarely timely. The Germans recognised that air influence on ground operations was not confined to direct air support and used careful, unified planning to shape the battlefield. For example, the campaign started with a massive strike by 3,500 *Luftwaffe* aircraft on 10 May,[28] which not only emasculated the Dutch and Belgian air forces, but also supported the land assault through the innovative use of transport aircraft and gliders to conduct airborne assaults on key airfields, fortifications and river crossings. This unprecedented concentration of effort proved to be psychologically devastating, allowing the Germans to seize and hold the initiative, and move around Boyd's 'Observe-Orientate-Decision-Act' command cycle[29] far more quickly than the Allies throughout the rest of the battle.

In every campaign, there is a point where one side irrevocably starts to win and the other starts to lose. In the battle for France, the decisive act, when the Allies began to lose the physical capability and will to resist,[30] took place between 13 and 15 May, when Guderian's *XIX Panzerkorps* pierced the 'continuous front' by crossing the Meuse at Sedan, and was then able to break-out into open country after defeating a French counterattack at Stonne. With few further Allied mobile reserves

A German pontoon bridge across the river Meuse at Sedan

available, the Germans were able to thrust towards the coast, isolating the Allied manoeuvre forces, their centre of gravity, in the north, and making their ultimate defeat inevitable.[31]

In an example of 'mirror-imaging',[32] Huntziger, the commander of the French 2nd Army, had assumed that the Germans would not be ready to cross the river until at least 18 May, as this is when the French would have been able to mount the operation, but Guderian unhinged the defence by attacking as early as 13 May. The German bridgehead was established by a deliberate joint operation, which used three *panzer* divisions and the whole of *VII Fliegerkorps*. In accordance with doctrine, direct air support was used only sparingly in the campaign, but it was focused at critical points to provide a crucial edge,[33] and the *Luftwaffe's* shared culture with the *Wehrmacht* meant that the concept of *schwerpunkt* was instinctively understood and effort massed when required. In contrast, Huntziger could not obtain any fighter cover, so the *Luftwaffe* was able to attack in relays, providing continuous support and maximising the effect on the morale of the reservists in the two, poor quality, 'B-class' divisions defending Sedan.

The psychological value of air strikes had long been recognised by the *Luftwaffe*, which had fitted its *Stuka* dive-bombers with a screaming air siren. An officer described the result of an attack that inflicted little physical damage: the soldiers 'were absolutely shattered… on this first occasion the effect was truly fantastic'.[34] The *Stukas* continued to make threatening passes after they had dropped their bombs, and the demoralized defenders panicked and broke when rumours of a tank attack circulated, even though Guderain had been unable to ferry any heavy equipment over the river at that stage. The morale effect of air attack has continued to be highly significant. An Irish Guards war diary from 1944 noted how German troops surrendered due to 'shock and demoralization,' when dummy attacks were flown by *Typhoon* fighter-bombers, which had used all their weapons in earlier strikes,[35] and a clear parallel can be drawn with non-kinetic 'shows of force', which have proved effective in current operations in Afghanistan and Iraq.

In contrast to the unity of German air-land operations, uncoordinated attacks by the RAF and *L'Armée de l'Air* against the bridgehead resulted in catastrophic losses, the 'real Valley of Death'[36] that effectively knocked both the French bomber force and the AASF out of the battle. These were caused by the dense network of 200 anti-aircraft guns that had been quickly deployed around the pontoon-bridges and to *Luftwaffe* fighters, 250 Allied sorties being overwhelmed by 814 German sorties and demonstrating how, once again, the Germans were able to concentrate their forces at the decisive point.[37]

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Contemporaneous lessons

Following the campaign, the War Office and Air Staff undertook reviews of army-air cooperation, although characteristically, these were conducted entirely separately and without representation from the other service. General Bartholomew, an officer who 'had been renowned in the interwar period for his undisguised hatred of the RAF',[38] began his investigation with the premise that Army organisation and doctrine had been sound and it was the RAF that had failed,[39] a myopic view that illustrates the cultural and institutional context that shaped joint operations in 1940. His committee recommended that air support be provided along what was thought to be the *Luftwaffe* model, with the creation of a tactical air force under army command, to be sub-allocated to divisional and corps commanders. However, this was a fundamental misunderstanding of German technique, where air power was never controlled directly by the *Wehrmacht*, but instead concentrated under centralised control for specific missions as part of an integrated air-land battle plan. Bartholomew also endorsed a requirement for specialised dive-bombers to act as airborne artillery, reflecting the iconic status that the *Stuka* had attained, if not an appreciation of its vulnerabilities and limitations.[40] The Army's enduring predilection for air power it could actually see in action was understandable, but misconceived. What had delivered success for the Germans was primarily indirect air support – isolating the battlefield and cutting communications – following the achievement of air superiority, but both of these effects were invisible to the soldier on the battlefield and consequently, not well understood. According to Buckley, only 15 per cent of the *Luftwaffe's* effort was dedicated to direct army support, and this figure includes all *Stuka* sorties, most of which were not tasked for CAS.[41] These figures may be open to question, but the point remains that the perception created by the effectiveness of German CAS when it was used – because it was tangible – was out of all proportion to the relatively minor effort actually expended on it by the *Luftwaffe* in 1940.

The British Army wanted dive-bombers to act as aerial artillery, but did not understand that this had been a minor role for the Stuka in 1940

Unsurprisingly, the Air Staff drew different conclusions to the War Office. It considered that the Army had failed to recognise an approach to war where dislocation was more important than wholesale physical destruction, and indirect support had been most effective in influencing ground operations. It emphasised the criticality of air superiority as a prerequisite for army-air cooperation, arguing that if this could be achieved, then the whole of available air power could be used to meet Army needs, negating the requirement for specialist cooperation aircraft or dive-bombers. This assessment was supported by the evidence; on 12 May, a squadron of *Stukas* lost 16 aircraft to just five French fighters when it was caught without its fighter escort,[42] and later wartime experience demonstrated that fighter-bombers were far less vulnerable to *flak* and fighters than either the *Luftwaffe*'s *Stukas* or the AASF's light bombers and the Air Component's specialist cooperation aircraft in providing direct support. The Air Staff's analysis was essentially accurate, and in comparing the two reports, it is difficult to contest Hall's conclusion that 'Britain's most senior soldiers were very slow and reluctant learners'.[43]

Willingness still existed to break the impasse, and the War Office and Air Ministry sanctioned joint trials that led to the 'Wann-Woodall Report'. This identified the fundamental weakness of the British air-support method as insufficient contact between Army and RAF staffs, exacerbated by the physical separation of headquarters and the lack of a reliable communications network. As a result, mobile communication links with forward troops were developed, and a joint RAF/Army control centre created, where unified planning could be conducted. However, support for the Army was still not regarded as a core task by the RAF, especially as the prospect of invasion receded, so these lessons were not codified as doctrine and Army Cooperation Command, established in December 1940, fell into abeyance. Consequently, Tedder had to develop an air support mechanism from first principles in the Middle East. Although largely based on empirical practice, this was eventually fused with elements of the Wann-Woodall system in time for the Gazala battles in 1942, where the Desert Air Force, the RAF's first tactical air force, was able to reduce the average response time from dispatch of air request to aircraft arriving over the target – the key measure of effectiveness – to thirty minutes. Although a British air support system had been established which remained essentially the same throughout the rest of the war,[44] the highly perishable nature of effective joint cooperation is indicated by the difficulties that were experienced in transplanting Tedder's method between theatres; it took a considerable period of time following D-Day before the level of efficiency achieved in the Western Desert was replicated in North-West Europe.

Enduring lessons

The Allies' most crucial failing was their lack of unity of purpose. They were never able to recognise the point of decision, and then coordinate their efforts in time and space to mass combat power there, exemplified by the piecemeal and indecisive response to the German bridgehead at the Meuse. This stemmed from the complex and stove-piped command structure, which hampered decision-making and was extremely vulnerable to dislocation. In the Great War, it had taken four years

of conflict, and near disaster in 1918, before the Allies acknowledged the requirement for a supreme commander, but in 1940, Gamelin did not have Foch's authority as a *generalissimo*, and with the battle effectively lost after just five days with the German break-out from the Meuse, there was no time for the Allies to adapt their organisational structure and establish proper unity of command. The British did relearn the lesson that coalition operations require a joint commander, reflected in the appointment of Eisenhower for Operation Torch in 1942 and thereafter, but the present labyrinthine command arrangements for the International Stability Assistance Force in Afghanistan, with interwoven layers of national and coalition structures, indicate that in limited wars, where there is no existential threat, political imperatives may well take priority over military efficiency.

Personalities and relationships can overcome process and ameliorate inadequate structures or, to some extent, the lack of shared doctrine or training. But in 1940, the character of the commanders militated against this. There was little personal empathy, staff talks were not held until March 1939, and the breathing space provided by 'the phoney war' was largely squandered. The British had no confidence in the French, and the French were always wary of British motives. Gort was very conscious of his responsibility for Britain's only field army, while the RAF's overriding priorities were to maintain a viable fighter-force to defend Great Britain while directing Bomber Command's main effort against the Ruhr, putting it 'in the uncomfortable posture of a man looking over both shoulders at once'.[45] A lack of understanding was equally evident in joint operations, where interwar rivalries had resulted in doctrinal development proceeding on essentially single service lines. With no common culture, the Army did not know how to ask for help and, despite the bravery of its aircrew, the RAF did not know what help to provide.[46] The fundamental lesson of 1940 is that there is nothing simple, or instinctive, about the successful execution of combined or joint operations, and attaining the common understanding required demands a significant level of effort and engagement to break down strong, single service or national cultures. This cannot be achieved overnight, and may not happen at all without the impetus provided by operations.

Conclusion

The performance of the German military in 1940 was by no means flawless and, in numbers and technology, it had few advantages over the British and French. However, its practical and realistic joint doctrine masked its weaknesses[47] and, wedded to a culture that demanded the 'joy of responsibility',[48] produced a series of small tactical advantages that were leveraged by swift decision-making into the shattering operational success that completely unhinged the Allies in what became the 'unimaginable hell' of mid-May. The British and French were complicit in what was an essentially moral and intellectual, rather than physical defeat, because they failed to understand, in Clausewitz's words, 'the kind of war on which they [were] embarking'.[49] Lacking the tradition of ruthless analysis and incremental innovation that served the Germans so well, the strategic context and their own institutional cultures limited their ability to recognise or implement the

lessons offered by the combined-arms offensives of 1918, the Spanish Civil War, or the Polish campaign, and they held firm to the belief that a war in the west would be low-tempo, linear and single-service in the manner of 1914-17. It was this failure of expectation, rather than anything revolutionary about *blitzkrieg* itself, that made it unimaginable to the Allies as a way of war. Subsequently, they were simply not allowed the time to adapt, even had they been predisposed to do so.

The conduct of Allied combined and joint operations in 1940 throw the enduring requirements necessary for success into sharp relief: first, there must be a real willingness to cooperate; second, headquarters should ideally be collocated, allowing the formulation of unified plans; third, a shared language or lexicon should be used; and finally, an understanding of the other component or nationality is essential to build trust. Developing this sort of common culture is not quick or easy, and while lessons are hard learned, they are highly perishable and easily forgotten. It is striking, in the joint arena, how air-land integration follows a cyclic pattern, with armies and air forces being forced together by exposure to operations, but springing apart to revert to single-service type when removed from the crucible of war. Just as the RAF and Army diverged in 1918, so they drifted steadily apart again during the Cold War. It took an acknowledgement of the problems in air support experienced during Operation TELIC in 2003 to renew British interest in air-land cooperation, leading to initiatives such as the Coningham-Keyes project and the formation of the Joint Air Land Organisation.[50]

If conducting unilateral joint operations is difficult, then achieving effective joint and combined practice is even more problematic, especially if an inter-agency element adds another layer of complexity to the mix, and current operations in Afghanistan indicate, *inter alia*, that the requirements for collocated headquarters and unified planning have been either forgotten or disregarded. The final word may be left to General Ismay, the Chief of Churchill's personal staff and a senior soldier deeply versed in inter-service politics. He understood that in joint and combined operations, friction is never attributable to one party alone:

It almost seemed as if the Air Staff would prefer to have their forces under Beelzebub rather than anyone connected with the Army, but when one recalls the views which were then held by the General Staff on the employment of air power, one can scarcely blame them.[51]

Notes

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