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Tactical Air Power Controversies in Normandy A Question of Doctrine

Paul Johnston

The history of tactical air power in the battle of Normandy has been fraught with both misunderstanding and contradiction. Largely ignored by the army-centric historians who have written the histories of the campaign, it has been asserted on the one hand that Allied air power was overwhelming and on the other that the system for controlling it was cumbersome and ineffective. On the face of it, at least, there would appear to be some tension between those two schools of thought. Which is more accurate? In order to examine that question, it is important to begin with an understanding of the doctrine for tactical air power - the contemporary doctrine of the time - and disputes about both that doctrine and the role of air power in the campaign. What emerges is that there is enough blame to go around for all parties - and enough credit. In truth, the doctrine of the time was under-developed, and this simply reflected some of the larger doctrinal weaknesses of the Western Allies' militaries.

One Traditional View...

One of the more famous paintings of the Second World War is *Rocket Firing Typhoons over the Falaise Gap, Normandy 1944* by Frank Wootton. It captures a traditional image of Allied air power over the Normandy battlefield - crushing air supremacy that doomed the Germans. Chester Wilmot made this point early in his classic history of the war, *The Struggle/or Europe*: "The value of this air supremacy can hardly be overrated."¹ He is seconded in this opinion by virtually all of the Germans who fought

in the campaign, in particular by the famous Field-Marshal Erwin Rommel. A much quoted 12 June 1944 message from Rommel to Berlin reads:

Our own operations are rendered extraordinarily difficult and in part impossible to carry out [owing to] the exceptionally strong and, in some respects overwhelming, superiority of the enemy air force.²

...And Some Army Accusations

It is perhaps somewhat paradoxical, therefore, that there is another theme running through commentary on the Battle of Normandy, and that is criticism of air support. Many critics have complained - some vociferously if not viciously - that the RAF³ was intransigent, uncooperative and sometimes downright stinting in its provision of air support to the land campaign.

Only a year after the war, Major-General C.C. Mann, who as a brigadier had been the Chief of Staff at First Canadian Army headquarters throughout the Northwest Europe campaign, made a striking and surprisingly blunt accusation. He described the basis of the British and Commonwealth doctrine for air support as "unsound."⁴

Mann strongly believed that RAF air support had been stinting and unresponsive during the campaign in Northwest Europe. And this was not just his opinion upon reflection after the fact. In the midst of some of the worst fighting of the Normandy campaign, he had felt strongly enough

about this to have taken the time to pen a long memorandum *to* Lieutenant-General H.D.G. Crerar, the commander of First Canadian Army.

The situation as it stands at present makes it quite impossible to expect that there can be any heavy or effective air attacks within a matter of several hours, to say the least, which require resources beyond those within the capacity of the Tactical Group supporting the Army concerned.⁵

Mann was especially disturbed by a particular air support request which he outlined in great detail. In the end, the RAF had declined to fill it. Mann considered this unacceptable.

In my opinion, the action of the ground forces is sabotaged, rather than supported, by the present practice of the Tactical Group with whom we have been cooperating.⁶

This issue of timeliness, or perhaps more accurately responsiveness - getting close support air attacks on target as quickly as possible after Army request - has dominated consideration of the tactical air support issue from the very start. It was the issue that drove the first British efforts to reform their air support system after the debacle at Dunkirk and it was the issue that was central to complaints from the Army about air support throughout the Overlord campaign, the most vociferous example being (then) Brigadier Mann's accusations. Indeed, the timeliness issue has dominated the historiography of the issue down to the present day. Many commentators have discussed it, in tones generally disapproving of the RAF.⁷ Most recently Ian Gooderson, in his analysis of Allied tactical air power, stated:

The British system proved very successful in processing pre-planned air support strikes, but the more difficult test was how quickly air support could be provided in response to impromptu requests from forward troops, where speed was vitally important. In this respect, both in Italy and in the early stages of the campaign in North-West Europe, the process was simply not fast enough.⁸

Are such accusations fair or accurate? In large part this question comes down to doctrine. After all, just what is the best way to apply air power against an enemy army in the field? Think of it this way - in June 1944 the Western Allies had over 9,000 aircraft in their various tactical air forces, the British and Commonwealth with

over 2,000 in 2nd Tactical Air Force, specifically dedicated to OVERLORD. Now, having amassed such a vast armada, what should be done with it? Bomb German defensive positions right along the front? Attack supply depots further in the rear? Try and shoot up columns on the move? All of the above? Which is more profitable? Which is more effective? Where should the emphasis go? This is the nub of the doctrinal question, and as one might expect, there was not unanimity. But first of all, this whole discussion poses an obvious question: just how fast was the response to army requests for air support? Significantly, after making the above sweeping accusation, Gooderson does not answer this question. In order to answer it, we need a quick overview of the air support doctrine of the time.

The Background: Inter-Service Rivalry

By 1944, British air support doctrine had gone through an extensive evolution. The war began in 1939 with some considerable enmity between the Army and the RAF, even by the normal standards of inter-service rivalry. Indeed, the Army (and the RN) had at various times tried to have the RAF dissolved and its assets divided between the two older services.⁹ For its part, the RAF had preached the new doctrine of strategic bombing, which the RAF's founders and early leaders believed would render the older services themselves obsolescent, if not entirely obsolete.¹⁰ "The bomber will always get through," as the saying went. In this environment, not only did the RAF not allocate any significant amount of resources towards air support to armies in the field, but they did not think very much about that particular issue either.¹¹ The result of all of this was a system of air support in France in 1940 that was cumbersome, slow and ineffective - one of the contributing factors to the debacle at Dunkirk.

While still convinced that strategic bombers would win the war, even the RAF's hierarchy realized that air support would have to be improved, and shortly after Dunkirk Air Marshal A.S. Barratt, who had been the commander of the RAF forces in France in 1940, was made commander of new command within the RAF - Army Cooperation Command. And within this new command two officers, both also veterans of the recent disaster in France - Brigadier J.D.

Canadian Forces Photo Unit [CFFU] PL 29247



A Spitfire of 2nd Tactical Air Force is loaded with a 500-pound bomb in preparation for a dive-bombing attack on the invasion coast.

Woodall of the Army and Group Captain A. Wann of the RAF - were sent to the quiet backwater of Northern Ireland to jointly study the problem of air support to armies and propose solutions.¹² This they did, producing what came to be known as the "Wann/Woodall Report." The key feature of the Wann/Woodall recommendations was the creation of an elaborate system of radio links, to allow the rapid passage of air support requests via a special communications network, outside of the normal chain of command. This report formed the basis for what became British and Commonwealth doctrine for air support. After some experimentation, the Wann/Woodall approach was exported to North Africa, where some independent developments had been made in the field. Together, these two stands of development gave rise to what became known as "Tactical Air Forces," the first such tactical air force being the famous Desert Air Force or "DAF."¹³

A Compromise: "Joint Command"

Notwithstanding the progress being made at the operational and tactical levels, fierce Army/RAF disputes over command and control of air forces continued. The Army was keen to have air forces for ground support organic to their own service, or at least under Army command.

This the RAF stoutly resisted, and even while the new tactical air force idea was coming together in North Africa the bureaucratic turf war over command and control escalated all the way up to Churchill himself.¹⁴ He produced a compromise slightly favourable to the RAF. Contrary to the Air Staffs original wishes, a considerable portion of the RAF's resources would be devoted specifically to army support in the tactical air forces. But against the Army's demand, these air forces earmarked for army support would remain a part of the RAF, under sole RAF command. The Army and RAF remained separate services, and they operated under separate commanders, even in the furtherance of one combined plan. As contemporary doctrine put it:

The Army Commander tells the Air Force Commander what he wants to achieve, and the Air Staff, having examined the problem, make Air plans with the Army's aim constantly in view.¹⁵

Under this system, headquarters were paired at each level of command. For Operation Overlord, 2nd Tactical Air Force (TAF) itself was in support of Montgomery's 21st Army Group, and both of these formations had a headquarters which were deemed to be co-equal. At the next level down, 83 Group and 84 Group were to be

in support of Second British and First Canadian Armies respectively. This arrangement is important, because the principle of joint command meant that contrary to the Army's wishes, at no level could Army commanders *order* air support. Air forces were never under the command of Army commanders; both services remained under their own, completely separate, chains of command. In fact, the lowest level at which the two chains of command met was in the person of the Supreme Commander himself, General Dwight Eisenhower.¹⁶ As Brigadier Mann's accusations make clear, this was a contentious issue.

The System in Normandy

By the time of the Normandy campaign, British doctrine for army/air operations had matured considerably. Drawing upon the development process begun by the Warm/Woodall report and the experience of the DAF, two authoritative pamphlets were released in early 1944: *Army/Air Operations: Pamphlet No. 1 - General Principles and Organization*, and *Army I Air Operations Pamphlet No. 2 - Direct Support*."

This doctrine distinguished between "indirect" and "direct" support. Indirect support

was defined as "attacks on objectives which do not have an immediate effect on the land battle, but nevertheless contribute to the broad plan."¹⁸ Typically that involved attacking enemy lines of communication, shipping, bases, rail targets and the like by heavy or medium bombers, but fighter-bombers were used against such targets as well. Direct support, on the other hand, was defined as "attacks upon enemy forces actually engaged in the land battle."¹⁹ Typical targets included defensive positions, hostile batteries of artillery or concentrations of armour. "Direct Support" is thus generally analogous - but not identical - to the modern term "close air support," which did not appear in the official British terminology of 1944. When targets such as panzers or artillery concentrating just to the rear were discovered, air strikes on these targets could be requested, and this was considered "direct support." Direct support was thus a slightly broader term than the modern close air support. It included not just close support, but also that air power applied behind the lines, but still within the immediate battle area.²⁰ The most common means of dispatching such direct support into the German rear was by means of a mission known as "armed reconnaissance."

Armed reconnaissance, or "armed recce" as it was commonly known, was a mission type in which a unit of fighter-bombers patrolled a given

A Canadian Group Captain looks at the offensive punch of the Hawker Typhoon - its Rocket Projectiles.



a route or area behind German lines. They would range over this area, collecting valuable intelligence and attacking any targets of opportunity, with bombs, rockets or guns.²¹ This was the mission type that led to so many shot-up German columns on the Norman roads, and it came to be perhaps the most important - and contentious - mission type of the campaign.

Direct support was further categorized on the basis of urgency, distinction being made between "impromptu" and "pre-arranged" requests for air support.²² Pre-arranged attacks were planned through the dedicated staff process, sometimes weeks ahead of time, but routinely for the next day. Impromptu requests were originated in the heat of battle by leading Army elements and forwarded via the special air request radio network first envisioned in the Wann/Woodall report.

Perhaps the most famous means of providing air support was "cabrank," a system of close support in which a package of fighter-bombers, normally four Typhoons but sometimes an entire squadron, circled a specific point just behind the front, available to swoop down upon a target as soon as a forward controller called for support.²³ If the ground troops were advancing, the cabrank could advance with them. This procedure was immensely popular with the Army, perhaps because the circling aircraft were so reassuringly visible to friendly troops, but also because it meant that air support was available literally within minutes.

Pre-arranged air support

The centre of the process for planning pre-arranged air support was the air conference at Army/Group headquarters, which was meant to be held every evening but which in practice usually met only approximately every other day.²⁴ These were quite large affairs, often attended by some 20 staff officers and chaired by the Army headquarters Chief of Staff. This conference would discuss the situation and routine operations for the next day and after the conference executive orders for the flying wings would be issued by the Group headquarters, usually by teleprinter. Additionally, specific conferences would be called as necessary to produce "Air Programmes" for major operations.²⁵

Impromptu Request Procedure

Since all of these elements were tied together on a single radio network specially dedicated to air support requests, information could be passed about quickly. The intent was to allow the forward outstations, often with divisional or even brigade headquarters, to pass air requests directly back to Group/Army headquarters, without passing through the intermediate divisional and corps levels of command. The Army/Composite Group joint air staff could then either authorize or deny the request.²⁶ If a forward controller was present with a cabrank overhead, air strikes could be ordered in without reference back to the Army/Composite Group headquarters. (See Box on next page.)

Consideration

So, let us return to the question we started with. Just how responsive was RAF air support in Normandy? As we have seen, response time varied widely, and depended in large part on what *type* of request was being made.

Pre-arranged support for major offensives were planned well in advance through the normal command channels.

"Routine" pre-arranged missions were generally set out the evening before, usually based on planning and requests through the normal command channels.

Impromptu requests varied depending on the priority of the requesting Army unit and circumstances. In the general run of things, an impromptu request for fighter-bomber support from a standard tentacle took from one to two hours to fill - if it was decided to fill it.²⁷

If a VCP or FCP was forward, and a CABRANK was overhead, the response could be within minutes.

It is not clear that this is such a poor performance. Indeed, in the case of cabranks with a forward controller, response from the air could be faster than the guns. Admittedly, cabranks were the exception rather than the rule, but cabranks were an extremely costly means of employing air power.²⁸ In most cases a cabrank consisted of between four and 12 Typhoons. Given loiter time, flying time, reloading and refuelling time, to keep just one cabrank filled generally required an entire wing (three

The Forward Control of Air Support

How were impromptu air strikes actually called onto targets? They were requested by the various independent wireless detachments with *Hie* leading Army headquarters. These were commonly known as "tentacles," since this was what they so resembled on the radio network organization charts.¹ There were various sorts of tentacles, with varying configuration and equipment. These were modified somewhat over the course of the campaign, but generally they were organized along the following lines.

"Standard" Tentacles

These detachments were commanded by an artillery subaltern,² and they were crewed by three Royal Corps of Signals soldiers, who operated and maintained the radios, and one driver mechanic.³ Normally mounted in a fifteen hundredweight signals truck, they were equipped with two "Canadian Number 9" type

wireless sets, which gave them an effective range of about 40 kilometres.⁴ This allowed them to "net in" to the special air support radio network and pass back air support requests directly to the Joint Battle Room at Army/Group headquarters. Coming from the artillery, the tentacle officers were specialists in fire support and could advise the local ground commander on the employment of air support. However, the primary task of a normal tentacle was to pass air requests from the leading divisional and brigade headquarters directly back to the joint Army/Composite Group headquarters via the ASSU net.⁶ Standard tentacles did not have any radios that could communicate with aircraft.

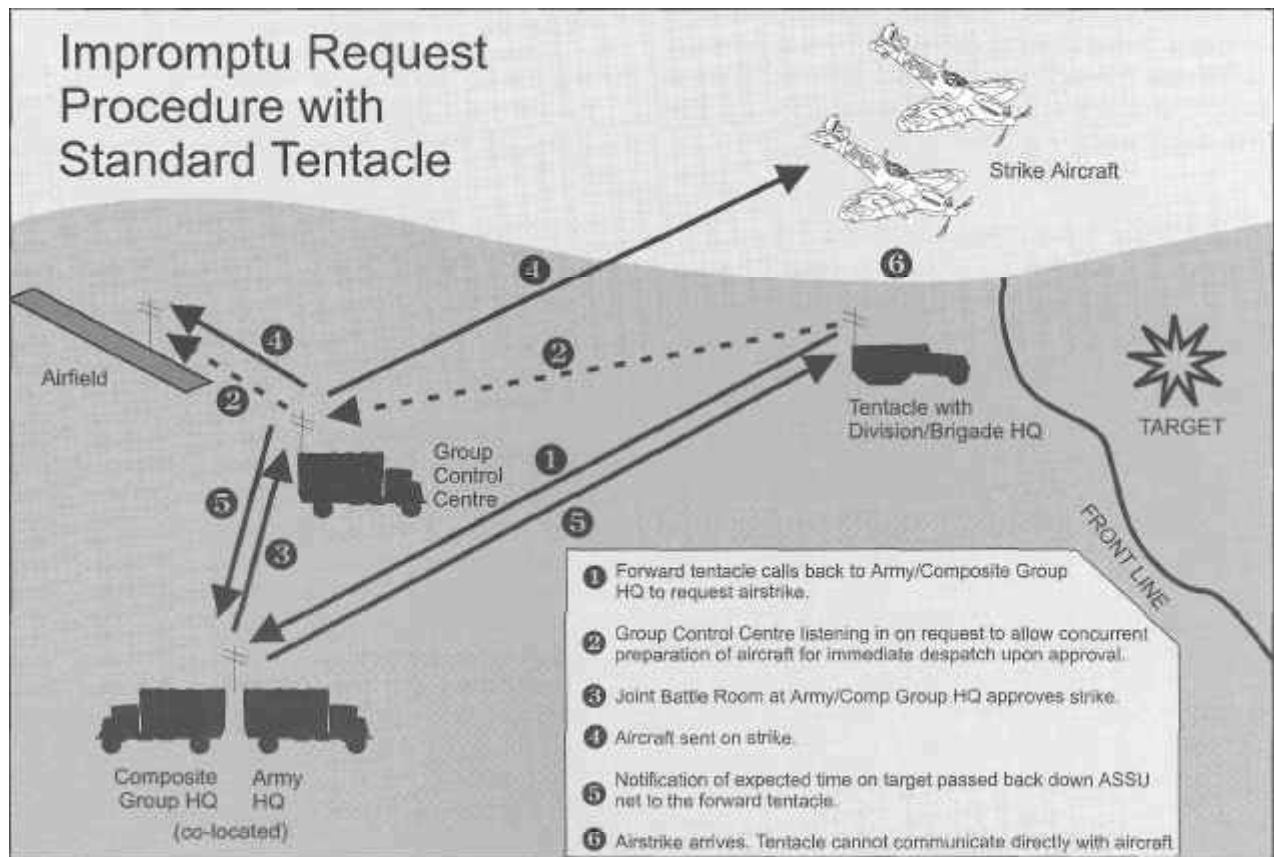
FCP

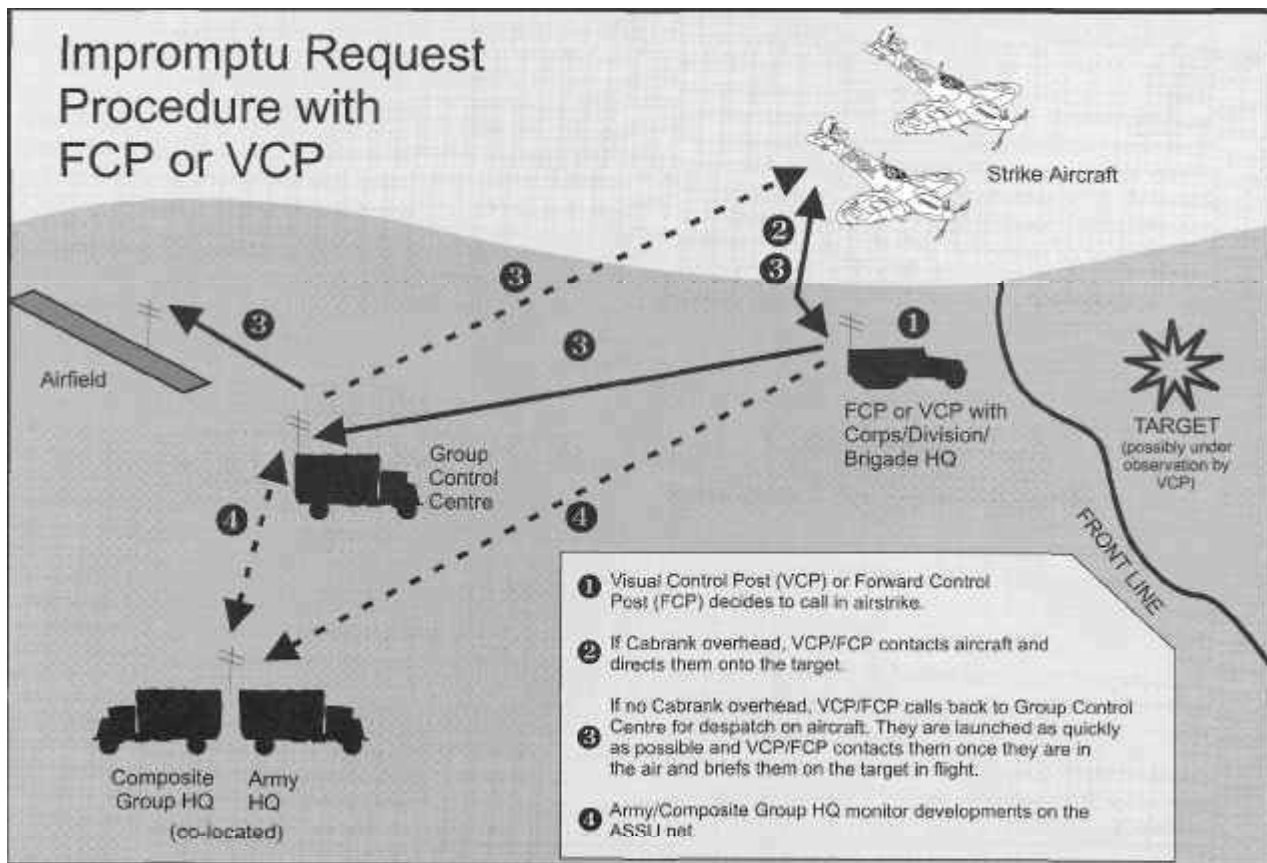
Each Army/Composite Group had one Forward Control Post or FCP. There was only one within each Group/Army, and it was deployed to

the corps headquarters deemed to be the priority for air support.⁶ FCPs were much larger than all other types of Forward tentacles, generally consisting of 10 personnel all ranks, mounted in at least two primary vehicles, either heavy trucks or M14 half-tracked vehicles, plus usually a trailer and a jeep.⁷ The FCP's were equipped with both army type radios for the air support request net, and TR.1143 VHF radios to speak with aircraft.⁸ Unlike the ordinary tentacles, with their VHF radio an FCP could talk directly with overhead aircraft, for a range of about 30 to 40 kilometres.⁹

VCP

Visual Control Posts or VCPs were an innovation introduced part way through the Normandy campaign, the first one being employed in Operation "Goodwood" on 18 July. Essentially a standard tentacle augmented by a fighter-bomber pilot with a VHF radio for communication with overhead aircraft, as the name implies they were meant for directing air strikes onto targets under the VCP's direct observation. There were three VCPs in each Army/Composite Group,¹⁰ but they were not entirely successful, apparently because in





Drawn by Paul Johnston and Mike Bechtold ©2000

practice they were seldom able to adopt positions that gave good observation of targets.¹¹ In consequence, VCPs came to be employed as de facto miniature FCPs, normally sited with the headquarters of leading divisions or brigades.¹² VCPs consisted of a tank or White Scout car rigged with the required radio sets, and a total of five personnel all ranks.¹³

Notes

1. Bidwell and Graham, *Fire-Power*, p.265.
2. There is some confusion about this. Originally, Air Liaison Officers (ALOs) were used, but according to Bidwell and Graham, this was discontinued in early 1944, *Firepower*, p.266. However, the memo "Organization and Employment of 1 Canadian ASSU" 8 March 1944, NAC RG 24 Vol. 10671 file 215C1.093(D2) states that there were officers in every tentacle, but that artillery subalterns (ie. lieutenants) rather than actual ALOs were used.
3. *Air Support and Air Recce*, Ch.4, para 4.
4. *Ibid.*, Ch.2 p.4. For information on the Canadian No.9 radio set, see *Wireless for the Warrior Volume 1*, a history of Second World War military radios held at the : : Communications and Electronics Branch museum in Kingston, ON.
5. *Army/Air Operations (1) General Principles and Organization*, p.22.
6. *Ibid.*
7. Memo "Forward Aids to Air Support", 1 September 1944, NAC RG 24 Vol 10671 file 215C 1.093.
8. Memo, "Report by CSO [Chief Signals Officer] 83 Group on the Operation of Signals During 1944", February 1945, PRO AIR 37/333.
9. *Ibid.*



*Flying control personnel of a Canadian Spitfire
Wing stand outside their radio control truck.*

CFPU PL 33408

10. Some sources state that there was only one VCP per Army/Composite Group. However, AIR 37/333 "Report by CSO 83 Group," states that there were three. Also, various air programmes, for instance for Op Totalize, include tasks for more than one VCP [see "Op TOTALIZE - AIR PROGRAMME" 6 August 1944, NAC RG 24 Vol 10671 file 215C1.096(D3)].
11. Main Headquarters 21st Army Group, "Notes on Air Support June-October 1944" November 1944, PRO WO 205/556, p.5.
12. There is a certain amount of confusion about this. Gooderson, *Air Power at the Battlefield*, p.27, states that experience in Normandy showed VCPs could seldom exercise visual control over air strikes and so "were modified to become

small forward air-support controls. They became known as...FCPs." However, FCPs were larger than VCPs, and it seems clear that FCPs were developed before VCPs. Apparently, what happened is not that VCPs became FCPs, but that VCPs came to be employed as de facto miniature FCPs. For details on VCP and FCP organization and equipment, see: HQ 2nd TAF Memo "Forward Direction of Aircraft" 16 September 1944, PRO AIR 2/7870, para 6; Main Headquarters 21st Army Group, "Notes on Air Support June-October 1944" November 1944, PRO WO 205/556; and *Air Support and Air Recce*, Chapter 4.

13. Memo "Forward Aids to Air Support" 1 September 1944, NAC RG 24 Vol 10671 file 215C1.093.



"Watch me sink the next one into the right pocket!"

squadrons) of Typhoons. There were only six Typhoon wings in all of 2nd TAF. So cabranks were reserved for when they were really needed - those comparatively rare cases when *immediate* close support really was essential.²⁹ It was used sparingly, but it was available when necessary.

So what can be said about the Army criticisms of Air Force responsiveness? It would be tempting to conclude straight off that these Army/RAF problems were a hangover from the prewar inter-service rivalry which had thoroughly poisoned relations between the two services. At the time, this was certainly the view of the Army in general and Brigadier Mann in particular. Since then, many historians have maintained that the primary motive behind the alleged RAF intransigence was fear of coming under Army domination, and desire to stress the RAF's independence.³⁰

Surely, this view is too simple. It is difficult at best to peer into the minds of men long dead and discern their personal motives. Whatever those motives may have been, personal acrimonies should not be allowed to obscure the fact that there *was* a substantive intellectual dispute. Reflecting a theme that stretched at least back to the 1930s, the RAF was genuinely concerned to ensure that its air power was

centralized for concerted blows, rather than "penny packeted out" to every army formation along the length of the front. Thus, the RAF preferred not to farm out all of their resources to a cabrank for every division or corps.

Furthermore, it has to be asked, why would an Army suddenly need air support of a weight "beyond...the capacity of the Tactical Group supporting the Army concerned," as Mann put it³¹? Presumably only in the event of an unexpected, very large scale, enemy offensive manoeuvre, or conversely some sudden and unexpected enemy collapse that they wished to capitalize upon. Does that really describe the requests Brigadier Mann was complaining about? The fact is, that on those occasions when there really was such a sudden great need, 2nd TAF's resources were indeed quickly concentrated - for instance during the German counteroffensive around Mortain, or during the battle to close the Falaise gap. Finally, once again it must be stressed that if it really was important to have air support more quickly, a cabrank would be laid on.

The debate, then, really hinges on the issue of the desired function for tactical air power. Was it meant to be, in essence, additional fire support for the forward troops, a supplement to the artillery? In that case timeliness of response would be critical. Or was it meant to deny the

Germans freedom of manoeuvre and subject them to a grim attritional battle? Alternatively, the doctrinal intent could have been to disrupt higher level German plans and intentions. In either of the latter two cases, timeliness of response would be far less critical; indeed, in those cases the priority of effort would be far behind the German lines.

RAF Doctrinal Intent

Not surprisingly, given RAF attitudes, air support doctrine in 1944, such as it was, stressed the importance of central and independent control of air power, so as to be able to strike at the decisive points. The key doctrinal manual of the time, *Army/Air Operations (1) General Principles and Organization*, stated:

The air effort will be concentrated on a vital target at the decisive point. The tendency to fritter away the effort on relatively unimportant targets must be sternly resisted.³²

In the same vein, *Army/Air Operations (2) Direct Support* added:

The temptation to abuse the flexibility of air power by attacking targets that may appear to be favourable, but which in fact are not vital to the battle, must be resisted; otherwise the forces available may be dissipated and not used to the best advantage of the operation as a whole. The maximum effort must be concentrated at the decisive place.³³

What is perhaps surprising is that this doctrine had been produced, not by the RAF or the Air Ministry, but by the War Office.³⁴ In fact, the principal author and editor of the above two quotations was an Army officer.³⁵

The Flip Side: RAF Shortcomings

It is all very well to say that air power should be concentrated in some decisive way - the RAF's explanation for turning down Army requests. What actual targets should be attacked to effect such decisive concentration? This was a key problem. As we have seen, under the doctrine of joint command "the Army Commander tells the Air Force Commander what he wants to achieve, and the Air Staff, having examined the problem, make Air plans with the Army's aim constantly

Flying Officer Arthur Vincent examines the damage to his Typhoon after returning from an attack on a railway bridge near Rouen.



CTFU PL 30161



Air Vice Marshal Sir Arthur Coningham, Commander of 2nd Tactical Air Force addresses his men in Normandy.

in view."³⁶ The British Army's immediate postwar analysis of air support contains some particularly bitter words about this approach.

The theory that the army should confine itself to stating the problem in general terms, and the air forces should then decide the method in all its detail has proved quite impracticable when applied literally in combined operations.³⁷

In support of this, the report goes on to point out:

It is educative to realise that, in this campaign, out of every hundred attacks carried out from the air by the tactical air forces, it is estimated that at least ninety five have been on targets selected, named and annotated by the army alone, including in many cases the provision of the actual aiming points. With the exception of those targets directly related to the enemy air forces, it has been the army almost exclusively which has produced the targets, and which has been the principal contributor to the preparation of the air plan in direct support of a particular battle.³⁸

This is almost certainly a fair criticism, for the RAF system did not in fact include much provision for targeting. Targets were expected to come from either the daily planning conferences - where it would be the Army that raised them - or up through the air support request net, which would also be, therefore, from the Army. Second TAF lacked the necessary staff to select any actual targets for attack other than through those two mechanisms. More critically, the RAF overall lacked the expertise and the doctrine for target

selection in a land campaign.³⁹ After all, just what are the best targets to attack with air power - especially given the technical limitations of the time - when one wants to, for instance, ensure that "enemy road movements...[are] continually harassed."⁴⁰ Bridges? Road choke points in villages? Columns on the move?

The basic air support doctrine of the time had little to say about this. Quite simply, the doctrine of the time had not thought these issues through. If the RAF wanted to maintain that air officers were the sole experts on the application of air power, then reasonably they should have addressed the targeting issue rigorously.

Concentration?

Another issue that the RAF must answer for is its actual efforts to concentrate their air power. Having nailed their colours to the mast of "concentrating air power" as the reason for turning down Army requests, just how effectively did they concentrate their air power?

With the exception of major offensives, the close support effort was not particularly focused, being driven from the "bottom-up," rather than the "top-down" (i.e. requests were initiated by forward troops, either through air support radio network for impromptu missions or up the Army chain-of-command for consideration at the daily air conference for pre-arranged missions).

A perception of unfocused effort is furthered by the means used to direct the armed reces, which was the mission type that consumed the most sorties.⁴¹ Armed reces appear to have been allocated largely on a simple geographic basis. Headquarters 21st Army Group and 2nd TAF designated areas for armed recce coverage to each Composite Group, and these areas were further sub-divided and allotted to Wings by the respective Group Control Centre (GCC).⁴² At the time the RAF considered this an effective system because air reconnaissance information arrived at the GCCs first, and could therefore be used immediately to direct the armed recce effort.⁴³ This is doubtless true, but the larger issue is that since the GCCs were purely RAF organizations dedicated to air control (as opposed to the Joint Battle Room formed at the Army/Group co-located headquarters), the distribution of armed reces was in fact being determined by RAF planners in isolation from the Army. Presumably they simply directed armed reces to what were thought to be the most fertile hunting grounds within the assigned area. Most critically, there was no mechanism to *concentrate* armed reces in areas that would complement and enhance the overall Allied scheme of manoeuvre or campaign plan. It appears that armed reces were largely shotgunned out on the basis of aircraft availability and what were perceived to be fertile hunting grounds within arbitrary geographic areas that had been designated not to concentrate 2nd TAF's tactical air power, but primarily as a de-confliction control measure.⁴⁴

Conclusion

It is very clear that the system developed to control air support, whatever its doctrinal origins, was a technical marvel. It could indeed rapidly concentrate air power against the enemy, as demonstrated around Mortain and the mouth of the Falaise gap. Furthermore, it *did* include specific provisions for getting air support onto targets within moments of request - the cabrank system.

So what are we to make of the criticisms from some quarters of the Army camp that air support was intransigent, or at least unresponsive? Such criticisms seem to come down to the complaint that 2nd TAF would not delegate on-call fighter-bombers to every local commander along the front who wanted them, as they wanted them.

As we have seen, that would have been to ignore the issue of concentration of force. In fact, in doctrine and policy statements the Army did officially acknowledge that air power should be concentrated. Some Army commanders appear to have had false expectations about air support, and to a certain extent these false expectations have become conventional wisdom.

The nub of the issue is that the only way to make the air support more responsive to every Army request from the front would have been to allocate a greater weight of effort to cabranks - at the expense of other mission types. Inevitably, that would have dispersed the air effort, concentrating it nowhere. It is not clear that overall this would have been more effective. It is clear, on the other hand, that at those times when it *was* considered important to concentrate air power for direct intervention in the land battle - for major offensives, around Mortain, and during the closing of the Falaise gap - 2nd TAF's effort was devoted whole-heartedly to direct support.

All of this touches upon what is perhaps the central historical debate of the Normandy campaign - the performance of the Allied armies, in particular at the operational level. Many historians have been sharply critical of the Allied commanders handling of the campaign.⁴⁵ What appears to have happened is that as breakthrough attempt followed breakthrough attempt - without success - the Army became ever more dependent upon firepower to batter their way forward. This propensity later led Air Marshal Arthur Tedder to wryly observe: "The Army having been drugged with bombs, it is going to be a difficult process to cure the drug addicts."⁴⁶ The Army commanders also became increasingly fixated upon the tactical level of the fighting, losing their sense of the operational art. Unsurprisingly, therefore, the air support they called for was narrow in nature, tending towards a desire for on-call tactical help everywhere, with massive heavy bomber strikes to precede any advance.

To be fair to the Army critics, however, it is equally clear that the RAF was not properly prepared for fighting a land campaign. They lacked the expertise and machinery for effective targeting, and by default this central function fell into the Army's lap. This while the RAF was stoutly maintaining that only air officers were

expert in the application of air power. As a result, 2nd TAF's efforts throughout the campaign were not as focused as they perhaps could have been.

Why did this happen, when the air support doctrine of the time stressed concentration and even included prescient warnings against "the temptation to abuse the flexibility of air power" by "frittering away the effort on relatively unimportant targets." It seems that in the heat of battle - and clash of personalities between key commanders - practice ran away from doctrine. Arguably this reflected the difficulty of the moment, and the inherent limitations of the doctrine in the first place. Certainly the Army critics would view it that way.

However, air support doctrine was not really fully developed. Because of the all-consuming Army/RAF arguments over air power and strategic bombing, neither side gave much serious thought to applying air power in a land campaign. When it was finally decided, very late in the day, to form tactical air forces for just this role, all of the available energy was consumed by frantic efforts to knit together a working organization and solve the immediate practical problems. In this an extraordinary success was achieved, but little time or energy was left over for contemplation of the more subtle - and difficult - doctrinal questions, such as where to concentrate the air effort and how to effect the actual targeting. Doubtless too, this doctrinal failure on the RAF's part reflected the larger doctrinal failure of the Allied forces at the operational level.

Nevertheless, the campaign was in the end successful for the Western Allies. Given the near-run nature of that success, all of the Allied contributions were critical. Second TAF did succeed in helping defeat the German armies in the West. Although its doctrinal limitations made it a somewhat blunt instrument, it was a powerful one.

Notes

1. Chester Wilmot, *The Struggle for Europe* (London: Collins, 1954) p.289.
2. This message is quoted *ibid*, p.313, and widely repeated elsewhere, for instance in John Terraine's important history of the RAF in World War II, *The Right of the Line* (London: Hodder and Stoughton, 1985) p.637.
3. Throughout this work Royal Air Force will be abbreviated RAF, and this should be taken to include all of the Commonwealth Air Forces collectively, as an institution. Likewise, Army with a capital "A" is used to refer to the British and Commonwealth Armies as an institution.
4. Major-General CC Mann "An Analysis of the System for Direct Air Support in the Northwest Europe Campaign" Lecture to the Canadian Staff Course at the Royal Military College, Kingston, 25 July 1946, National Archives of Canada [NAC] Record Group [RG] 24 Vol.10671 file 215C 1.091, p.4. Such vociferous criticism from a serving officer in an official venue gives some indication of the passion this issue evoked.
5. Brigadier CC Mann, Chief of Staff 1st Canadian Army Headquarters, Memo "Requests for Air Sp" 11 August 1944, Directorate of History and Heritage (DHH), file 958C009(D72)
6. *Ibid*.
7. See for instance Max Hastings, *Overlord* (London: Pan, 1984) pp.267 & 270; Shelford Bidwell, and Dominick Graham, *Fire-Power: British Army Weapons and Theories of War 1904-1945* (London: Allen and Unwin, 1982), p.250; and Nigel Hamilton, *Monty*, Volume 2 *Master of the Battlefield 1942-1944* (London: Hamish Hamilton, 1986), pp.620-622 & pp.692-693, which includes some especially vituperative comments against Air Marshal Coningham. Even air historians have commented upon the difficulties of timeliness, for instance W.A. Jacobs "The Battle for France, 1944" pp.237-293 in *Case Studies in the Development of Close Air Support* ed by B.F. Cooling, (Washington: Office of Air Force History, 1990) pp.260 & 272.
8. Ian Gooderson, *Air Power at the Battlefield: Allied Close Air Support in Europe 1943-45* (London: Frank Cass, 1998), p.27. Gooderson's work, his doctoral dissertation at King's College, London, is essentially the first relevant scholarly analysis dedicated to tactical air power.
9. For accounts of this see in particular H. Montgomery Hyde, *British Air Policy Between the Wars 1918-1939* (London: Heinemann, 1976), p.490; and Barry Powers, *Strategy Without Slide-Rule* (London: Croom Helm, 1976), p. 158.
10. Brian Bond, *British Military Policy Between the Two World Wars* (Oxford: Oxford University Press, 1980) p.22; Max Hastings, *Bomber Command* (London: Michael Joseph, 1979) p.40; R. Higham, *The Military Intellectuals in Britain: 1918-1939*, pp.175, 196; R.J. Overy, *The Air War, 1939-1945* (New York: Stein and Day, 1981) pp. 12-13; Malcom Smith *British Air Strategy Between the Wars* (Oxford, 1984) pp.50, 55-56, 74, 304.
11. Powers, *Strategy Without Slide-Rule*, p. 167.
12. An official account of this is given in the originally classified report Air Historical Branch (AHB), *Air Support, The Second World War 1939-1945: Royal Air Force* (Air Ministry: Air Publication 3235, 1955), but the best account is Charles Carrington's memoir *Soldier at Bomber Command* (London: Leo Cooper, 1987). See also Bidwell and Graham, pp.264-265, and Richard Townsend Bickers *Air War Normandy* [London: Leo Cooper, 1994] pp. 150-167.
13. Terraine, *The Right of the Line*, p.352.
14. The best published account of this whole dispute is probably William A. Jacobs "Air Support for the British Army, 1939-1943" *Military Affairs* Vol. XLVI No. 4, December 1982, pp.197-182.
15. Headquarters No. 84 Group, "Organization of Staffs and Operations Rooms at R.A.F. Composite Group and Army Headquarters" no date, probably late 1944, Public Record Office [PRO] AIR 2/7870.

16. Major-General Mann, *An Analysis of the System for Direct Air Support in the North West Europe Campaign*, p.3. Mann states that he believes that on no occasion did any disputes over the allocation of tactical air power actually escalate to Eisenhower's level.
17. War Office, *Army /Air Operations Pamphlet No. 1 General Principles and Organization* (26/GS Publications/1127), 1944 and *Army/Air Operations Pamphlet No. 2 Direct Support* (26/GS Publications/1181), 1944. Both were edited and largely the work of Lieutenant Colonel C.E. Carrington. His memoirs of his work in air support development, *Soldier at Bomber Command* are of enormous value to understanding the development of air support doctrine. He was also an interesting figure in his own right, probably best known as the author of *Soldier From the Wars Returning, A Subaltern's War* and a fine biography of Kipling.
18. The wording is that of Air Vice-Marshal W.F. Dickson, "Address to Headquarters 1st Canadian Army" 7 June 1943, NAC RG 24 Vol 10671 file 215C1.093.
19. *Army I Air Operations (1) General Principles and Organization*, p.8.
20. This makes the 1944 conception of "direct support" more or less equivalent to a combination of the modern concepts of "Close Air Support" and "Battlefield Air Interdiction." For more on the modern concepts see Air Vice-Marshal R.A. Mason *Air Power: An Overview of Roles* (London: Brassey's Defence Publishers, 1987) p.66.
21. War Office, *Air Support and Air Reconnaissance, Aspects of Combined Operations in North West Europe, June 1944 - May 1945* immediate postwar report found in PRO AIR 37/881, (hereafter cited as *Air Support and Air Recce*), Chapter 3, p. 10. See also Gooderson, *Air Power at the Battlefield* pp. 199-201 for an examination of the tactic of armed recce.
22. *Army/Air Operations (2) Direct Support*, p. 12.
23. AHB, *Air Support*, p. 149.
24. *Air Support and Air Recce*, Chapter 3, para 12.
25. "Air Programmes" were produced through this conference system for all the large operations of the campaign (EPSOM, GOODWOOD, TOTALIZE etc). Ibid, Chapter 3, para 14, an Army report, somewhat sardonically notes that "RAF representatives with the necessary powers of decision were not always forthcoming."
26. *Air Support and Air Recce*, Chapter 3 para 16.
27. Memo, "Report on Visit to 84 Group on the 28th July, 1944," PRO AIR 2/7870, gives a figure of "about an hour," of which an average of 15 minutes was flying time. By other accounts, it often took closer to two hours, Headquarters 51 (H) Div, Memo "British and American Methods of Air Support" 7 March 1945, PRO WO 205/546.
28. See AHB, *Air Support*, p. 149 for an examination of this issue. Also, Gooderson, *Air Power at the Battlefield*, p.239.
29. Terraine, *The Right of the Line*, p.637.
30. See for example Hamilton, *Monty: Master of the Battlefield*, pp.620-622.
31. Brigadier CC Mann, Chief of Staff 1st Canadian Army Headquarters, Memo "Requests for Air Sp" 11 August 1944, DHH 958C009(D72)
32. *Army I Air Operations (1) General Principles and Organization*, p. 8.
33. *Army/Air Operations Pamphlet No. 2 Direct Support*, p.12.
34. That is to say, it had been produced by the government department responsible for the Army.
35. Lieutenant-Colonel Charles E. Carrington.
36. See note 15.
37. *Air Support and Air Recce*, Chapter 1, pp.7-8.
38. *Ibid*.
39. For that matter, selection of targets for strategic bombing also proved devilishly difficult, something which had not been anticipated by any of the pre-war bombing enthusiasts.
40. To quote the AEF Overall Air Plan for Op NEPTUNE, NAC RG 24 Vol 10400 file 200A2.016(D1).
41. Data from an immediate postwar Operational Research Section study "Armed Recce by Aircraft of 2nd TAF in the West European Campaign" PRO WO 291/1357. Critics of the RAF have always maintained that the most sorties were allocated to armed recce because it was the most free-ranging mission type, the least tied to the Army.
42. *Air Support and Air Recce*, Chapter 3, p. 10.
43. *Ibid*.
44. A "de-confliction" control measure is, like traffic lines on a highway, an airspace control measure to separate aircraft.
45. The literature in this debate is considerable. Max Hastings, for instance, argues that "The German army was the outstanding fighting force of the Second World War, and that it could be defeated by Allied soldiers only under the most overwhelmingly favourable conditions." *Overlord: D-Day and the Battle for Normandy* (London: Michael Joseph, 1984) p. 12. These charges are repeated more generally by John Ellis in *Brute Force*, (London: Andre Deutsch Limited, 1990). John A. English's analysis of the Canadian Army's performance in Normandy is even more critical, *Failure in High Command: The Canadian Army and the Normandy Campaign* (Ottawa: Golden Dog Press, 1991). Recently, something of a counter-movement appears to have developed, arguing that Allied performance was no worse than the German. Examples include Stephen E. Ambrose, *Citizen Soldiers: The US Army from the Normandy Beaches to the Bulge to the Surrender of Germany, June 7, 1944 -May 7, 1945* (New York: Simon & Schuster, 1997), and John Balkoski *Beyond the Beachhead: The 29th Infantry Division in Normandy* (Stackpole Books, 1999). For a succinct statement of this school of thought's views, see Terry Copp "From the Editor" in *Canadian Military History* Vol.7, No.4 Autumn 1998.
46. Lord Tedder, *With Prejudice* (London: Cassell, 1966) p.606. He was referring to the Canadian Army's requests for heavy bombers for the Walchern Island operation in October 1944.

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