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THE DEVELOPMENT OF BRITISH AIRBORNE FORCES IN WORLD WAR TWO AND THE CONCEPTS, EXPECTATIONS AND REALITY OF THEIR PARTICIPATION IN OPERATIONS MARKET GARDEN AND VARSITY.

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Abstract

This dissertation is an examination into the evolution of Britain's airborne forces during World War Two and their participation in two of the most contentious battles that they were involved in, Operations Market Garden and Varsity. These airborne operations were mired in controversy at the time and have remained so ever since. The 1st Airborne Division was reduced to a fragment of its once proud self after only nine days at Arnhem. Yet Arnhem is not a battle that should be examined in isolation. The major airborne operation that followed it, the Rhine crossing in March 1945, was also extremely controversial as a result of the considerable losses suffered by the 6th Airborne Division. The two battles are not separate actions; they form a continuous sequence in comprehending the development of airborne experience within the British military by war's end. An examination of the expansion of airborne forces from their earliest days provides a degree of illumination as to why the events at Arnhem and Hamminkeln transpired as they did.

The desire to create such a force was a far from seamless process and many issues emerged, some of which continued to influence events right until the end of the war. Clausewitz's famous dictum, that "the practice of war is uncertain and much subject to human error" fits perfectly the history of British airborne forces between 1940 and 1945. In attempting to create such a force during wartime conditions, many mistakes were invariably made and many compromises were required. It is the comprehension of these mistakes and compromises that enables a much deeper understanding of the events that took place at Arnhem and the reasons for its eventual failure. This in turn leads to much more acute understanding of the events surrounding Hamminkeln.

INTRODUCTION

During 1944 and 1945, the British use of airborne troops in World War Two reached its peak. On several occasions, thousands of troops were delivered to battle by parachute or glider, along with all their weapons and equipment. Since Britain possessed no parachute or glider troops at all in 1939, such complex and demanding operations demonstrated how far the airborne concept had come in a very short space of time. Even two years into the war, Britain would have been unable to deliver a tenth of the number who landed at Arnhem or Hamminkeln just a few short years later. The first British parachute operation, taking place in February 1941 in Italy (Operation Colossus*)*, contained just 35 men. In June 1944, an entire airborne division was landed in two lifts as part of D-Day. By March 1945 an entire airborne division was landed in one lift in just over an hour. It was a remarkable growth in capability for a brand new arm of the military.

Yet if Operations Market Garden and Varsity represented the sheer potency of the Allied airborne concept and also symbolised their industrial might, the considerable numbers of troops who fought (and in many cases died, were wounded or captured) camouflages the fact that this form of warfare, even in 1945, was still in its relative infancy. A new 'rule book' had had to be written for their use as none existed prior to war commencing and the harsh lessons that were learned often came at a bloody and painful price. While airborne forces have now become a recognised part of most developed countries' armed forces, their creation within Britain's in 1940 was an entirely novel concept. None of

Britain's most senior wartime commanders had any previous knowledge of or exposure to airborne forces. They simply had to adjust themselves to the new 'modus operandi' of this novel form of warfare and the notion of 'vertical envelopment'. As a result, such troops were not always used in the most effective fashion[1], even in the latter stages of the war, and historians continue to argue the merits of plans and decisions to this day.

The Allied airborne operations for Market Garden in September 1944 and Varsity in March 1945, in which the British 1st and 6th Airborne Divisions played such significant roles, saw the biggest combat use of parachute and air-landing forces that the world has ever seen. They were monumental in their undertaking and variously involved British, American, Polish and Canadian troops landing in the very heart of enemy territory. However, both remain surrounded by controversy to an extent not visited upon that other large Allied airborne operation, D-Day. The 1st Airborne Division was effectively destroyed during the nine days of battle at Arnhem in September 1944, losing nearly fifteen hundred[2] men killed or wounded. The casualty rate within the 6th Airborne Division during Operation Varsity in March 1945 was extremely high, with well over a thousand men killed, wounded or missing after only one day. Indeed, several prominent post-war military historians, among them Sir Max Hastings, challenge whether Varsity was necessary at all.

[1] Sometimes even commanders within airborne forces were guilty of making poor decisions. Lieutenant Colonel Chatterton, commanding the Glider Pilot Regiment in 1943, was appalled at the suggestions made by Major-General Hopkinson, then commanding 1st Airborne Division, for the Sicily invasion yet was told in no uncertain terms if he didn't comply he would be replaced immediately.

[2] 1,485 fatal casualties according to Martin Middlebrook, *Arnhem 1944,Tthe Airborne Battle* (Pen & Sword, Barnsley, 2009), p.439

It is against such a backdrop of sacrifice and bloodshed that this work examines the concepts that developed and evolved for the effective use of British airborne formations during World War Two. It then examines in detail the factors that affected the 1st and 6th Airborne Divisions during their respective actions, each of which were vast in scope and groundbreaking in their use of airborne troops. Indeed, the spectacle of watching so many aircraft and gliders transport the entire 6th and 17th Airborne Divisions to the eastern bank of the Rhine in March 1945 for Operation Varsity was something which convinced one young German soldier "that we could not win the war."[3]

However, the question was then, and remains to this day, whether or not the commitment of a British airborne division to battle at Arnhem and the Rhine crossing was a justifiable use of their particular talents or a squandering of some of Britain's premier fighting troops. Immense logistical resources and highly detailed planning were required to launch parachute and glider troops to battle in this fashion and arguments have raged ever since about the losses suffered compared to the benefits gained. Only by evaluating the experience of both battles is it possible to determine whether the concepts, plans, expectations and reality behind their employment were fundamentally sound or unrealistic.

[3] Clark, *Arnhem,* (Headline, London, 2008), p. 302

Chapter I. The Concept And Evolution Of Britain's Airborne Forces.

The British airborne forces that fought at Arnhem and Hamminkeln were the product of all the events and experiences that had affected military parachuting and gliding, both in Britain and elsewhere, since May 1940. Events, mistakes, support, lack of cooperation, successes and failures all helped to shape the evolution of the airborne arm and directly led to the policies and procedures adopted by the last year of the war. Consequently, in order to fully understand these two aforementioned battles, one must also comprehend the concepts at the heart of the airborne 'raison d'être.' These include the developments that affected them, the quantity of weapons, ammunition and equipment transported to battle, issues surrounding glider pilots and tug crews, the attitude of RAF commanders, the aircraft used for airborne and resupply operations and even the speed and methods by with which troops could be rallied on the Dropping or Landing Zones (DZs and LZs).

To do otherwise is to miss seemingly trivial yet actually essential issues, all of which contribute to a greater comprehension of the state of British airborne forces in 1944 and 1945, how they undertook the tasks allocated to them and ultimately why events transpired as they did. These are not always given due weight in historical accounts, yet an account of Operations Market Garden and Varsity is incomplete without them. Some had far-reaching consequences that still resonated in September 1944 and March 1945.

The evolution of British airborne forces and the concepts that guided their use were more the product of compromises, especially regarding the RAF, than that of a vision which matured untouched by change. Airborne forces were (and still are) one of the most complex and expensive means of launching troops into battle. Furthermore, each separate arm of the airborne force, paratroops, glider pilots and airlanding troops, developed its own methods and concepts, some of which were realised at considerable cost. This was especially the case with the gliders that were used. These were then woven together to form a whole that could be used for operations. Lastly, it is only possible to understand the effectiveness of Britain's airborne forces if one understands the strengths and weaknesses of the key items of equipment used.

Such troops contributed greatly to the national war effort during World War Two, fighting in almost all theatres where British land forces fought. Along the way, they suffered thousands of dead and wounded.[4] In addition, many hundreds more aircrew and dispatchers were lost in RAF transport and resupply aircraft. Commonwealth War Grave Cemeteries across all of Europe, North Africa and elsewhere bear silent witness to their commitment. The name famously given to British paratroops by the Germans they fought in North Africa, 'Die Röte Teufeln' (the Red Devils), was won on the battlefield and was a measure of their fighting prowess.

[4] Nearly 8,500 airborne soldiers were killed or wounded during WW2. Statistics from G Norton, *The Red Devils; From Bruneval to the Falklands,* (Leo Cooper, London, 1984) p.299

The origin of all British airborne forces can be traced back to Churchill's memorandum to General Hastings Ismay, his Chief Military Assistant, on 22 June 1940, asking for "a corps of at least five thousand parachute troops" to be raised. He wrote, "I hear something is being done already to form such a corps but only, I believe, on a very small scale … Pray let me have a note from the War Office on the subject."[5] However, Britain was not strongly placed to develop airborne forces at all in 1940 and any desires to create such an arm ran headlong into the hugely daunting and incontestable facts that there was no experience, no equipment, no facilities to train airborne soldiers and no dedicated aircraft to transport them.

Britain had disregarded the creation of an airborne force prior to 1939. Several other nations, particularly the Russians, embraced the concept. They pioneered the use of paratroops and were the first nation to use them in combat.[6] General Archibald Wavell, then head of the British Military Delegation watching the Red Army military exercises of 1936, observed a mass descent by some 1,200 Russian soldiers, including eighteen light field guns and over one hundred machine guns. He wrote that "if I had not witnessed the descents I could not have believed such a thing possible."[7] Nevertheless, such developments excited little interest in the upper ranks of the British military or the War Office. This was

[5] HMSO, *By Air To Battle*, (HMSO, London, 1945) p. 7
[6] Soviet paratroops were first used in combat in 1929, when fifteen men were parachuted in to the besieged town of Gharm in present day Tajikistan to reinforce Soviet troops being attacked by Basmachi fighters. Small numbers (often of several dozen) were dropped during the 1939-1940 Russo-Finnish war but met with varying degrees of success. The drop at Petsamo in northern Finland on 02 December 1939, during the opening stages of the war, was typical of such an approach. The entire parachuting force was destroyed, many being killed in descent.
[7] HMSO, *By Air To Battle*, p.8

due partly to the feeling that “there was little scope for the employment of airborne forces on a scale sufficient to exert any major influence on a campaign or battle” and partly due to financial issues “which discouraged expenditure on apparently rather fantastic new ideas.”[8]

Even during the final years of peace, when Germany was developing her own paratroops and glider forces at a rapid pace, Britain continued to disregard any notion of such developments. Parachutes remained the exclusive preserve of aircrew and aerial daredevils and gliders were for civilian sporting use only. It was the German use of paratroops and glider troops during their invasion of Western Europe in May and June 1940 that highlighted to Britain’s military and political leaders just how potent and effective such forces could be, if used appropriately.

In particular, it was the capture of the supposedly impregnable Belgian fort of Eben Emael on 10-11 May 1940 that dramatically underlined their potential on the battlefield. This successful attack saw seventy eight glider-borne troops overpower more than a thousand Belgian soldiers to capture the fortress. However, the Air Ministry was not slow in pointing to the failure of German parachute troops at Dombås in Norway and at Ypenburg airfield in Holland and expressed the opinion “that it was at least possible that this was the last time that parachute troops are used on a serious scale in major operations.”[9] Churchill,

[8] Terence Otway, *The Second World War, 1939-1945, Army, Airborne Forces,* (HMSO, London, 1951) p3
[9] Ibid p. 22

only recently appointed as Prime Minister, was adamant that a British airborne force would be raised.

It was he who provided much of the impetus during the early days of 1940 and 1941 for a similar force to be raised by Britain. His note set in motion the development of British airborne forces that was later to play such a major part in the war effort. However, this came at a time when the creation of such an offensively-minded force was largely irrelevant. The most pressing need, certainly in the apprehensive atmosphere after Dunkirk, was for defensive forces. In June 1940, a sizeable portion of the British army had only just been evacuated from the continent, where it had left most of its heavy equipment behind. The most immediate need was for all available manpower to reorganise and prepare to defend against possible Nazi invasion. This also required the urgent replacing of the vast quantities of equipment which had been left behind in France and Belgium. This fact, combined with the fact that industry was still moving towards a war footing, meant that shortages were the order of the day for all Services. Consequently, the development of an airborne force was extremely protracted during this period.

Furthermore, and most importantly of all, there was no policy as to how the proposed parachute force was to be used. Three different options seemed available at the time. They could be used for raids and be evacuated by air or sea or saboteurs could be parachuted in. All options were a long way from the 5,000 men Churchill envisaged and the numbers under discussion were between

100 and 500 parachute troops. It was, however, all that could be realistically delivered with the resources then available.

Ultimately, arguments about resources "revolved around the simple fact that airborne troops were more easily produced than pilots and aircraft."[10] From this simple statement sprang two main issues that affected airborne troops throughout most of the war and were directly attributable to the RAF. First, the lack of enthusiasm within the highest echelons of the RAF led to problems with the provision of enough aircraft for dropping paratroops and towing gliders. Second, the lack of a dedicated transport aircraft, suitable for dropping paratroops and towing gliders, created significant problems.

Watching a demonstration on 16 April, 1942, Churchill saw the entire fleet of aircraft then available to airborne forces, twelve obsolete Whitley bombers for the paratroops and nine Hector aircraft, each towing a Hotspur glider. It was a fairly dismal indication of the RAF's attitude and involvement. This attitude continued to cast a shadow on all airborne planning between 1941 and early 1944. It provoked much discourse between the Air Ministry, Downing Street and the War Office, was central to the slow build up of airborne forces and dominated the use and effectiveness of all Britain's airborne troops at that time.

[10] Victor Dover, *The Sky Generals,* (Cassell, London, 1981) p.108

Yet, even in April 1942, an Air Ministry report confirmed the "we cannot afford to have learners on either end of the two rope"[11] and that pilots and crews for tug aircraft should be provided, in order that there should be no delays or lack of experience in transporting gliders to battle. However, just how dire a situation still existed, in spite of the Air Ministry's report, was firmly indicated during the Dieppe raid of August 1942. The planning had originally included 1st Parachute Battalion but such was the lack of aircraft that two squadrons from Bomber Command had to be brought in at the final stages to enable the troops to be lifted. Fortuitously, their part in the raid was cancelled at the last minute, whilst waiting for take off.

The RAF's position was straightforward to understand, even if it revealed a blinkered and unimaginative approach to the contribution airborne forces could make to the war effort. Between 1940 and 1943, the RAF's focus had been initially on fighters for defence, then bombers for attack and other aircraft to help combat the submarine threat. Using highly trained bomber crews to drop paratroops and tow gliders was viewed as wasteful. In late 1942, Sir Charles Portal, Chief of the Air Staff, summed up the RAF's position by stating that "the bombing of German industry was an incomparably greater contribution to the war than the training and constant availability of the airborne division."[12] Senior officers such as Portal and Sir Arthur Harris, Commander-in-Chief Bomber Command from February 1942, believed that converting bomber crews to drop paratroops or tow gliders would take only some few hours training. Furthermore,

[11] Claude Smith, *History of the Glider Pilot Regiment (GPR),* (Pen & Sword, Barnsley, 2009), p. 27
[12] Otway, *Airborne Forces*, p. 60

Harris believed that airborne operations were not a practical method of war and had little faith in them, regarding them as "vulnerable", "restricted" and a "drain on aircraft and aircrews."[13] He argued that casualties could potentially be enormous, that the weather in Europe was generally unsuitable for parachuting and that only limited numbers of paratroops (one brigade's worth) could be carried. In his opinion, using Bomber aircraft to transport airborne soldiers would "cripple Bomber Command."[14]

The focus on heavy bomber raids intensified as the war progressed and was, in truth, almost the only practical way to attack targets within Germany and occupied Europe for a large part of the war. Yet this focus, to the exclusion of the activities of other services, did not endear Harris to other senior members of Britain's military or political leadership and certainly not within airborne circles. The complexities of the factors surrounding this issue were not lost on Churchill. Nevertheless, he realised that unless the RAF cooperated, Britain's airborne forces would remain limited in ability and effectiveness. In January 1943, no less a personage than General Browning, then commander of 1st Airborne Division, was moved to comment that "there were only 48 aircraft available for dropping paratroops or towing gliders, none of which was capable of towing a fully-loaded Horsa."[15] Not pulling any punches, he added "Bomber Command display no interest and carry out no training in parachuting or towing."[16] What this meant in effect was that Britain's airborne forces were being forced to adopt a small-scale

[13] Dover, *Sky Generals*, p. 46
[14] Ibid, p.60
[15] The Horsa gilder was the main workhorse of the British glider force during World War Two, with nearly 4000 built by 1945 and capable of carrying up to 25 fully armed troops.
[16] Smith, *History of the GPR*, p. 42

raiding approach rather than the approach favoured by Browning and other airborne commanders, one where "their greatest importance lay in their power to attack the enemy in force on his open flank – over the top … [as part of] … a well-balanced force of all-arms concentrated on vital objectives."[17]

After complaints reached Churchill from elsewhere in early 1943[18], he informed Harris that the necessary aircraft for transportation of airborne troops must be found. Still affected by the Dardanelles fiasco of 1915 and "the brilliant idea mucked up by bungling down the line", he was determined "not to let ineptitude or bloody-mindedness at lower levels ruin audacious projects for a second time."[19]

Entrenched attitudes within the RAF notwithstanding, airborne transportation woes were often compounded by a genuine lack of suitable aircraft necessary to deliver the airborne troops. This issue dogged airborne operations throughout the war and, even in 1945, only two airborne divisions were used for Operation Varsity rather than the three which were initially proposed. This was solely due to not enough aircraft being available to drop three airborne divisions in one lift.

[17] Otway, *Airborne Forces*, p.51
[18] Two members of the Glider Pilot Regiment, Staff Sgt Waldron and Major Willoughby, unknown to each other, made complaints to D N Pritt, MP and Vernon Bartlett (BBC war commentator) respectively, concerning the RAF's failures to provide aircraft for glider training.
[19] Martin Gilbert, *In Search of Churchill*, (Harper Collins, London, 1995), p. 186

It was the gradual introduction of the Douglas Dakota aircraft into RAF service from 1942 and especially the formation of 46 Group RAF[20] in January 1944 (being totally equipped with this aircraft)[21] that marked a significant step forward for British, and indeed Allied, airborne forces. Previous to the introduction of this aircraft, it was the almost exclusive preserve of former bombers to tow gliders and drop paratroops. The Albemarle, Whitley and Halifax all played their respective roles in transporting airborne forces but could only drop ten paratroops each, with the Stirling able to drop twenty two men, all through a hole in the floor. It was the Dakota's ability to tow a Horsa glider or drop up to twenty paratroops that made it the outstanding all-purpose transport aircraft of the war.

Furthermore, the ability to jump through a door, rather than a hole, considerably speeded up the time taken to get all troops out of the aircraft, thereby increasing their chances of landing closer together. The mass introduction of this aircraft, with some 2000 eventually entering RAF service, enabled large-scale airborne landings to truly become a realistic option. Without it, "the scale of the Allies' airborne operations of 1944 and 1945 would have been impossible."[22]

What unequivocally highlighted the transportation issue once and for all and the pressing need for a solution was Operation Husky, the invasion of Sicily in 1943. The airborne attack that accompanied the invasion was the first time these forces had been used on such a scale by the Allies. The events that transpired,

[20] 38 Wing RAF was formed on 15 January 1942 from two squadrons. In October 1943, it was substantially expanded and re-designated 38 (Airborne Force) Group RAF. 46 Group RAF was formed on 17 January 1944 and flew transport operations as well as supporting airborne operations.
[21] Previous to this, British airborne forces had used the Dakota but they were flown by the USAAF.
[22] Smith, *History of the GPR*, p. 29

particularly the use of glider borne troops, was seen by some Allied commanders and politicians as extremely costly and little short of a disaster. Indeed some commanders, Eisenhower among them, expressed grave reservations about the whole airborne concept. He wrote to General Marshal, "I do not believe in the airborne division."[23] The reasons why were not difficult to see. As far as all British airborne operations for Operations Husky were concerned, less than 10% of the gliders and only a third of the parachute aircraft dropped on or within half a mile of the target area. Almost half the gliders used by the British during the initial invasion had landed in the sea[24], with hundreds of men being drowned.

Nevertheless, those airborne soldiers who had fought in Sicily had acquitted themselves well. The reports written after the battle highlighted one factor above all, that airborne troops could not perform to the best of their ability unless the crews who transported them to battle performed to the best of theirs and landed them in sufficient strength at the right place and time. The experience gained during the Sicily invasion made a mockery of Harris's statement of 22 August 1941 that tug crews needed only several hours training to be able to drop paratroopers or tow gliders effectively. Other senior Army officers also commented on this sorry state of affairs. General Alexander, in his report on the Sicily invasion, commented that "the outstanding weakness in the [airborne] set-up is the lack of trained air force pilots to transport them. The RAF must produce

[23] Dover, *Sky Generals,* p. 76
[24] Operation Ladbroke was the glider landings by 1st Air Landing Brigade on 9/10 July 1943, in support of the main sea landings. Out of 137 Waco and Horsa gliders that took off, sixty nine landed in the sea and only 12 landed in the correct area.

the pilots if we are to develop this arm ... Personally I firmly believe that …priority No.1 is for the airborne Corps."[25]

Even higher up the command chain, Field Marshal Sir John Dill[26] commented on this issue in March 1944 when he wrote that "we are not fully exploiting our inherent airborne potential or capability"[27] due, in part, to the lack of experienced airborne officers to help plan and coordinate airborne operations. This issue, at least, had been fully rectified by the date of the Normandy landings.

In a case of supreme irony, the airborne operations in Sicily were viewed by the Germans as pivotal to Allied success. It was the same situation which had occurred after Crete in May 1941, only reversed. Then, unaware of the scale of German losses, the British, and especially Churchill, had been impressed with the achievements of the German airborne troops and increased their own efforts in producing an airborne force. Hitler, however, had been appalled at the cost and had determined never to use paratroops in such a fashion again.

General Kurt Student, overall commander of German Fallschirmjäger (paratroops), wrote that "Allied airborne operations [in Sicily] were decisive, despite widely scattered drops" and was of the opinion that German reinforcements would have "driven the initial sea-borne landings back into the sea" had it not been for the long delays and large losses caused by the airborne

[25] ibid pp. 67-68
[26] Then Senior British Representative on the Combined Chiefs of Staff Committee in Washington
[27] Combined Chiefs of Staff Report 496, *Policy As To The Organisation and Employment Of Airborne Troops,* 2nd March 1944, p. 1

troops, especially those of the US 82nd Airborne Division. This view was shared by Field Marshal Kesselring, overall German commander during this campaign.

Regarding the parachute element of airborne forces, the concepts and techniques behind how to use British parachute forces most effectively developed as the war progressed. Several issues affecting the development of an effective parachute force were instantly evident. First, "everything had to be designed, worked out and built from the beginning."[28] Major John Rock was put in charge of the organisation of British airborne forces in June 1940 without "any information as to policy or task"[29] and with a "damaged parachute and jumping helmet captured from the Germans"[30] as inspiration for suitable parachuting equipment. The situation with gliders was little different.

The state of affairs was neatly summed up in 1940 by one senior RAF officer and is worth quoting in its entirety;

"There are very real difficulties in this parachuting business. We are trying to do what we have never done hitherto, namely to introduce a completely new arm into the Service at about five minutes notice, and with totally inadequate resources and personnel. Little, if any, practical experience is possessed in England of any of these problems and it will be necessary to cover in six months what the Germans have covered in six years."[31]

[28] Norton, *The Red Devils,* p.2
[29] HMSO, *By Air To Battle,* p.7
[30] Ibid p.9
[31] Otway, *Airborne Forces,* p.23

Instructors initially had little more experience than their trainees. Gradually the knowledge of how to conduct limited and then larger parachute operations was worked out. Accidents and occasional fatalities accompanied such progress[32] but it is remarkable how few people were killed or seriously injured, rather than how many, even in the very earliest days at Ringway airport, where the Central Landing School (later the Central Landing Establishment) was located.

The original parachute unit of five hundred men expanded rapidly. On a purely numerical issue, the most significant thing in evaluating the airborne forces possessed by Britain in late 1944 is how numerous they were when compared with the situation just four short years previously. By September 1944, Britain possessed two Airborne Divisions (the 1st and 6th) as well as an independent parachute brigade (the 2nd) and a variety of other airborne units. All could be considered among the cream of Britain's land forces.

Second, some of the most important issues were resolved early on, such as the design of the parachute, the height at which troops should be dropped and the carriage of personal equipment.[33] These were critical developments as the main workhorse of the glider force and the carrier of most of an airborne division's heavier equipment and more heavily armed troops, the Horsa, did not make an appearance until June 1942. Initial trials with the jumper standing on the back of a converted Whitley aircraft and pulling his own ripcord, thereby being dragged

[32] The first parachute course began jumping at Ringway on 21 July 1940. The first fatality occurred on 25 July 1940.

[33] Even though produced under extremely inadequate circumstances, some of the kit and equipment that was designed and produced at this stage, such as the X type parachute, kit bag and Horsa glider, were among the very best of any combatant nation during the war.

off, were not successful. Most importantly, the time delay between one jumper and the next meant a widely dispersed parachute force on the ground. The preferred method that was developed, and one that remained in use until the Dakota became the main transportation aircraft, was to jump through a hole in the floor of a converted bomber. This enabled a much more rapid dispatch of an aircraft's load than the 'pull off method.'

Another important development, that of the 'X' type parachute in 1940, enabled British airborne forces to be issued with what was arguably the best parachute of the whole war. It was superior to both American and German designs and, with only slight modifications, continued to be used well into the 1990's.[34] Its reliability was such that out of the hundreds of thousands of descents carried out using it, the chance of a fatal parachute malfunction was approximately one in twelve thousand[35].

Another system which was developed early on, one which proved vital for parachuting with increased amounts of equipment, was that of the kit bag. This was strapped to the leg of the parachutist and lowered by a quick release device once the canopy had deployed. Whilst moving with it strapped to the leg was extremely difficult, especially within the cramped confines of the redundant bombers initially used for parachuting, "it rapidly became an indispensable part of

[34] These modifications involved enlarging the canopy slightly. It became known as the PX parachute but was still in essence an X type parachute.
[35] Figures taken from parachuting statistics of No. 1 Parachute Training School, Ringway, 1940-48. http://www.justordinarymen.org.uk/page_1178095561265.html. Accessed 21 June 2010.

the parachutist's equipment"[36] and proved a straightforward issue when jumping from the Dakota. Even if they were still relatively lightly-armed, it enabled parachute formations to land with more ammunition and equipment than could otherwise be carried. With their personal weapons to hand, kitbags went a long way to dealing with the major problems encountered when using containers, that of them disappearing or being irretrievable. This was an advantage that many German paratroopers had not had during the landings on Crete, often with fatal consequences.

The issue of gliders and the selection and training of glider pilots was also resolved as the war progressed. It was evident, even from the earliest days of 1940, that gliders would be needed to land the heavier equipment that paratroops lacked but required. They also seemed to offer a more promising line of development in several other respects. More troops could be landed, with heavier equipment instantly available and in a unified body than was possible by paratroops, who would inevitably take time to reorganise once landed.[37] This was a major advantage in their ability to capitalise on the element of surprise. Also, until the Curtis-Wright C-46 Commando was first used in Europe in March 1945, a Horsa glider could hold more troops than any parachute aircraft used by the British. There were obvious limitations to the use of gliders, such as the need for extremely large and flat landing zones for the gliders to land on and the extreme precariousness of trying to use them at night, factors not so prevalent in

[36] Otway, *Airborne Forces,* p.411
[37] Dispersion, especially when jumping at night, in heavy flak or in strong winds, could significantly delay reorganisation.

the use of paratroops. However, since the quantity of aircraft available between 1940 and 1943 was an overriding factor, it appeared to make the most sense to concentrate on glider forces making up a significant part of any airborne force.

Against this, gliders were extremely vulnerable when approaching a target (as witnessed during Operations Husky and Varsity particularly) and relied intimately on the navigation and expertise of their tug crews in order to reach the target. Nevertheless, the airlanding brigades that developed were amongst the most heavily-armed of any British infantry brigades during the war and were substantially larger than any of the parachute brigades. In the original proposals for an airborne force in 1940, it was envisaged as being three-quarters glider-borne. Whilst these figures changed as the airborne divisions gradually assumed their final establishment and organisation, by 1944 the airlanding brigades were still generally between eight to nine hundred men stronger than any of the corresponding parachute brigades.

Several types of glider were developed, foremost among them the Horsa and Hamilcar. The Horsa became available from mid 1942 but the Hamilcar endured significant delays in its production. Even so, without either of these two gliders, the ability to transfer important heavy equipment, particularly artillery, and the 6-pounder and 17-pounder anti-tank guns, would have proved impossible. The pooling of resources between British and American forces also meant that the American Hadrian (or Waco) gliders were also used on occasion, though proved

to be less popular than the Horsa due to their smaller size and inability to transport heavier and larger items of equipment.

The Air Ministry was originally adamant that only fully-trained RAF or Army seconded pilots should fly gliders. However, shortage of aircrew meant that from late August 1941, it was accepted that glider pilots would be volunteers from the Army, although the term 'glider coxswains' was used somewhat disparagingly for a time. The concept of the glider pilot as the 'total soldier' became institutionalised early on. Not only could they fly a glider into battle but they were able to fight as well. Every action of World War Two in which they took part bore witness to this latter fact. This is something which stands in marked contrast to some US glider pilots, about whom the American airborne General, James Gavin, used to complain that once landed "were little more than a nuisance, willing … but with no idea what to do."[38]

It was the period May to December 1943 that saw the most important developments within the airborne establishment. In many ways these were also the least exciting, since they involved administration and organisation. However, British airborne troops were subsequently to benefit immensely from such changes. In particular, it was Major-General Browning[39] who highlighted the necessary changes and formalised the processes by which airborne forces should be organised and used. In his report of 20 August, 1943, he made recommendations which subsequently became accepted practice. In essence, a

[38] Smith, *History of the GPR*, p. xvi
[39] Then Major-General, Airborne Forces.

chain of command extending from the War Office, through 21 Army Group Headquarters to Headquarters, Airborne Troops (HQAT) and from there down to divisional commanders was established.

Three areas in particular are worth highlighting. Firstly a division was now to be considered "the minimum force used for operation[s]."[40] Second, HQAT now controlled, advised, trained, co-ordinated and informed world-wide all who served with or came into contact with all Allied airborne forces (less American airborne). It was the single most important step to establishing the direction and organisation for all subsequent British airborne operations for 1944 and 1945. Third, the formation of the First Allied Airborne Army (FAAA) in August 1944 was an extension of this principle and gave greater focus and control to the use of all Allied airborne units, something which had definitely been lacking up to this point.

The combination of the changes described above and especially the lessons learned from the airborne experience on D-Day[41], the first time a complete British airborne division had been used in battle, now placed the British airborne arm in a position where the fullest possible use could be made of their capabilities. The landings at Arnhem and at Hamminkeln were both the product of at least 4 years worth of airborne experience. The following chapters examine just how successfully these concepts were applied in the events at Arnhem and the Rhine crossing.

[40] Otway, *Airborne Forces,* p.137
[41] "The subsequent airborne operations at Arnhem and on the Rhine crossing were based to a large extent upon the conclusions drawn from Normandy." Ibid, p. 198

Chapter II. Operation 'Market Garden' 17-25 September 1944.

Plans, Concepts and Reasons for Failure.

Operation Market Garden was the largest airborne operation of the whole war and is also probably the most famous. The nine day struggle of the 1st Airborne Division around Arnhem and Oosterbeek won them undying fame and has entered the annals of history as probably **the** airborne battle of the whole war. It was, however, a defeat and the casualty lists make for sobering reading. Nearly twelve thousand[42] men landed at Arnhem. Almost 1,500 were to die there or perish in the following weeks from wounds sustained whilst fighting. The 1st Airborne Division effectively ceased to exist, with less than two thousand of its men being evacuated at the battle's end. Elsewhere thousands more, including American airborne soldiers, soldiers from Horrocks' XXX Corps, and RAF and RASC personnel, were to be killed, wounded or made prisoner.

Consequently, the fighting that took place around Arnhem and Oosterbeek cannot be seen in complete isolation from the rest of the events of Market Garden. However, in order to focus on those concepts, expectations and realities which affected the British at Arnhem, the planning and actions undertaken by the American 82nd and 101st Airborne Divisions around Eindhoven

[42] According to Middlebrook's authoritative account, "a total of 11,920 men took part in the airborne operations to Arnhem." The exact figures are; (a) 8,969 from the 1st Airborne Division, (b) 1,262 from the Glider Pilot Regiment and (c) 1,689 from the Polish Brigade. Middlebrook, *Arnhem 1944* pp. 438-439

and Nijmegen will be ignored, unless they directly impacted on the British component.

From the preceding gloomy appraisal of Market Garden, one could reasonably ask whether any of the central concepts behind the use of the British and Polish Airborne units had been applied at Arnhem. If they were, how it was possible for such a disaster to have befallen what was commonly regarded as one of the premier units in the British Army? It was certainly through no fault of the fighting soldier. When the fighting at Arnhem Bridge finally ended on 21 September, some German soldiers, only recently captured, were freed. A high ranking SS Officer commented to one such soldier that "having fought on all fronts before, he had never encountered such a hard … foe."[43] Even General Bittrich, commander of II SS Panzer Corps, admitted later that he "had never seen men fight as hard as the British at Arnhem and Oosterbeek."[44]

With hindsight, the original plan for Market Garden seems incredibly bold and imaginative, perhaps overly so. Much criticism has been laid at General Montgomery's feet for the daring nature of the plan. Then commander of 21st Army Group, he was convinced that the risks were worth taking and that the end of the war in Europe might be realised in 1944 if the operation was successful. All activity in war is a calculated gamble, since one can never really be sure what the enemy is doing. What was conclusively known was that German losses in

[43] Robert Kershaw, *It Never Snows In September, The German View of MARKET-GARDEN and the Battle of Arnhem, September 1944,* (Ian Allan Publishing Ltd, Hersham, 2009), p.218
[44] Cornelius Ryan, *A Bridge Too Far,* (Hodder, London, 2007), p. 459

Normandy, particularly the staggering level of destruction[45] inflicted upon them at Falaise, had been enormous. The 'Falaise Gap' was only finally closed on 21 August 1944, less than four weeks before Operation Market Garden was launched. German forces were left reeling as the Allies rapidly advanced across France and into Belgium. British troops advanced over 200 miles in just one week, capturing Antwerp and Brussels, before encountering increased resistance on the Meuse-Escaut Canal in Belgium at the start of September. This gave an undeniable impression of the German army in North-West Europe being in a state of imminent collapse.

At the same time, supply lines for a continuous Allied advance had reached crisis levels. The port of Antwerp could not be used as the island of Walcheren and its coastal defences still lay in German hands. Cherbourg was now too distant from the front line to be of much further use. All other ports recently captured could not handle the vast tonnage required for a general Allied advance. The worry was that experience clearly showed the Wehrmacht was capable of recovering quickly, if given breathing space. Therefore the advance had to continue quickly.

Both Patton and Hodges, commanding the US Third and First Armies further south, and Montgomery, commanding 21st Army Group on the left flank, were adamant that resources should be provided to them for the continuing drive, in the latter's case into Belgium and Holland. One of the overriding factors for

[45] It is estimated that some 450,000 German troops were lost as a result of the fighting in Normandy. Figures from Max Hastings, *Overlord, D Day and the Battle for Normandy 1944*, (Guild Publishing, London, 1984), p.313

continuing with the northern flank was that the range of transport aircraft based in Britain, where the FAAA was located, meant that any use of airborne troops favoured Montgomery. Additionally, the North German countryside was much better suited to armoured warfare than further south.

Eisenhower did not agree with the concept of a "pencil-like thrust"[46] and did not divert all resources to Montgomery. Nevertheless he allowed Montgomery to proceed with his plan and more logistical resources, an extra thousand tons a day, were allocated to him as a result of the meeting between the two senior generals on 10 September. The concept devised by Montgomery was simple enough in outline. An airborne force would capture all the main bridges leading from the Allied front line in northern Belgium through to the Rhine at Arnhem, with the British airborne troops at the northern end of the corridor. Powerful armoured ground forces would then smash through and could either go straight for the coast, splitting Holland in two and trapping large numbers of German troops, or turn right and head into what remained of Germany's industrial heartland. Originally the airborne component of this plan, codenamed COMET, envisaged all these tasks being completed by 1st Airborne Division and the Polish Parachute Brigade. The only other plan considered at this time, codenamed INFATUATE, was to use the FAAA to assist in clearing the Scheldt Estuary.

The two main problems with this latter task, namely the strength of the flak defences and the lack of suitable landing sites, meant this plan was vetoed early

[46] Major-General R Urquhart, *Arnhem,* (Pen & Sword, Barnsley, 2007), p.3

on. One other issue is also important to note. So many airborne plans had been prepared and cancelled at short notice that Lieutenant-General Browning, then deputy commander of FAAA, informed its Headquarters in August 1944 that 1st Airborne Division, the Polish Parachute Brigade and 52nd Lowland Division[47], were at seven days readiness for operations. What this meant in effect was that the detailed planning which had accompanied the use of 6th Airborne in Normandy, something regarded as a core concept for the use of airborne troops, was being relaxed.

Such was the speed of the Allied advance and the perceived expectation of German collapse, lengthy planning would only prevent British airborne troops from being used. Even many who held strong reservations about Market Garden were of the opinion that "shortcomings in the plan were readily forgiven as long as we could get in there."[48] Consequently, seven days was all the preparation time that was afforded to those who took part in Market Garden. One quote above all others stands as representative of the opinions of using the airborne troops in less than ideal circumstances. General Lewis Brereton, commander of the FAAA, said "the disorganisation of the enemy demands that chances be taken."[49]

However, that in turn meant that intelligence about the enemy's strengths and dispositions could be less than ideal. Only two main voices were raised prior to

[47] 52nd Lowland Division had been trained as an air-transportable unit and was available to fly in to suitable airstrips in support of their airborne colleagues.
[48] Brigadier Hackett, commanding 4th Parachute Brigade. Cited in Middlebrook, *Arnhem 1944,* p. 62
[49] Dover, *Sky Generals,* p. 128

Arnhem about this issue and both incurred the displeasure of Browning. One intelligence officer, Major Brian Urquhart, raised on 15th September the issue of recent aerial photographs of Arnhem, Dutch resistance reports and even reports from Montgomery's 21st Army Group, all of which pointed to greatly increased German strength there. None of these were full or precise and could well have been wrong. Crucially, no-one involved in the planning was privy to ULTRA intercepts, which would have categorically proved the extent of German forces present around Arnhem, had they been disseminated. Browning considered the information presented to him but the operation was not cancelled or amended and he ensured Major Urquhart was 'sent on sick leave.'

General Sosabowski was the other dissenting voice. He was intensely unhappy with many aspects of Operation COMET and "felt so certain that [Market Garden] was doomed to failure that he requested Browning to let him have his orders in writing."[50] Almost every historical analysis of Market Garden makes use of these two voices as clear indications of a doomed plan grinding inescapably to its foregone conclusion. Both Urquhart and Sosabowski were proved correct in their reservations, even though the plan came close to being successful, and no doubt reflected ruefully on events until their dying day. However, like most disasters that occur, other factors were equally important.

Of the other causes of the failure, all have been investigated at length and it would prove impossible to undertake a full analysis within the confines of this

[50] Ibid, p.146

work. However, several issues are so vital and run so strongly counter to the concepts and policies established that any examination of the effectiveness of the airborne troops at Arnhem cannot take place without them being mentioned.

First, the lack of aircraft allocated to the British for the initial landings at Arnhem was nothing short of devastating in its effects. Every airborne commander would have agreed with Urquhart when he stated that "an airborne division is designed to fight as a whole and should be dropped or landed as such."[51] The piecemeal landings were identified by the Germans as "the enemy's chief mistake."[52]

A proposed plan by 38 Group to get round the issue of lack of aircraft was to transport two lifts on the first day. They had suggested that the first lift would arrive on the DZs and LZs before dawn on 17 September, returning to drop a second lift later that day. Brigadier-General Paul Williams, commander of IX US Troop Carrier Command (IX TCC) and the man in overall charge of the airlift, informed Brereton that "concerns about aircrew fatigue and the time needed to undertake aircraft maintenance and repair battle damage"[53] meant only one lift would be considered on the first day. Furthermore, there would be no moon at that date and "both doctrine and experience warned against attempting airborne missions in total darkness."[54] Whilst one can understand the importance of the latter point, such a risk-averse policy, standing in stark contrast to the whole concept of Market Garden's 'airborne carpet', was to have tragic consequences.

[51] Urquhart, *Arnhem*, p.199
[52] Kershaw, *It Never Snows in September*, p. 308
[53] Clark, *Arnhem*, p.102
[54] Dr John C Warren, *Airborne Operations in World War Two, European Theatre*, USAF Historical Research Agency, 1956, p.195

Instead, only two brigades, one parachute and one airlanding, were landed on the first day in the LZs and DZs west of Arnhem. The glider-borne troops were required to guard these areas for subsequent lifts whilst 1 Parachute Brigade pushed towards the bridge in Arnhem. One former glider pilot[55] at Arnhem, interviewed in 2010, was still surprised that greater use was not made of the far more numerous and heavily-armed glider troops of 1st Airlanding Brigade in the initial push, they being sent forward to take the bridge instead of the fewer numbers of paratroopers. Even General Urquhart himself stated in his memoirs "that the troops used in the protection of the DZs and LZs would have been invaluable offensively during the first twenty-four hours. Perhaps our ideas were wrong."[56]

This point can be endlessly debated and boils down, in essence, to one of quantity versus quality. The two parachute brigades were **the** main component of 1st Airborne Division and the parachute battalions were trained to a generally high standard. They also had an extremely high level of fitness and an aggressive attitude towards soldiering. The glider troops, by comparison, were not volunteers and were made up of battalions transferred en masse to form the airlanding force. In his book, Middlebrook makes the point that "they may have lacked a little of the aggression in attack of the parachute battalions, but they were steadfast in defence; their character was probably halfway between the doggedness of ordinary British troops and the dash of parachute troops."[57] The

[55] Lt. Col (Retd) Ken Meade, OBE, DFM – personal interview with author.
[56] Urquhart, *Arnhem,* p. 199
[57] Middlebrook, *Arnhem 1944,* p. 30

one indisputable point that can be made is that by failing to land more troops in the first lift (in line with the agreed policy of concentration) or make greater use of 1st Airlanding Brigade, the troops of 1st, 2nd and 3rd Parachute Battalions were to find their lack of numbers, heavier weapons and ammunition telling when they began to run into German troops, a situation that was only to worsen as time went on.

General Urquhart had the circumstances of the lift forced on him. Browning explained, quite correctly, that "it's got to be bottom to top or you stand a chance of being massacred."[58] In other words, if the American links in the chain failed, the British and Poles at Arnhem would be left stranded and destroyed. This meant nearly all of the 101st Airborne, landing north of Eindhoven, was carried in the first lift (albeit without much of its own artillery since it was closest to the heavy artillery of XXX Corps) and the 82nd Airborne arrived in two lifts. What was difficult to understand at the time, and still seems nothing short of egotistical today, was that Browning took 38 gliders from Urquhart's first lift in order that his Corps Headquarters could be taken in with 82nd Airborne Division. That would have more than covered the gliders needed to lift either the remaining 75mm artillery guns of 1st Airlanding Light Regiment (33 gliders needed), the anti-tank guns of 2nd Airlanding Anti-Tank Battery (27 gliders required) or almost an entire extra Airlanding Battalion (41 gliders required), all of which would have been of far greater value than Browning's Headquarters at that stage of the battle. A

[58] Urquhart, *Arnhem*, p.5

delay of some sort on Browning's part would undoubtedly have been more prudent.

As one writer mentioned, "the general who commanded airborne troops … was no more useful than a private soldier until such time as he established his headquarters and assumed command by communication."[59] Browning did much excellent work on behalf of British airborne troops throughout the war, most of which was behind the scenes but nonetheless vital. This action, though, did quite the opposite and flew in the face of concepts which he had been instrumental in developing. He had been adamant in North Africa that "airborne troops in a major campaign could only influence a battle if they were used in large formations."[60] One German Prisoner of War (POW) made reference to this when interviewed after his capture. He highlighted the fact that the lack of concentration had proved critical, since "the Germans never faced the entire strength of the British 1 Para Div at one time."[61]

Browning's use of so many gliders was a largely futile attempt to gain airborne combat experience, the lack of which he felt enormously, at the expense of mass being delivered at a totally critical point and time. Moreover, his headquarters were of no use to 1st Airborne Division or the US 101st Airborne Division, at that time or subsequently. As soon as XXX Corps relieved the 101st, the Americans came under Horrock's control. Furthermore, until such time as XXX Corps

[59] Dover, *Sky Generals*, p. 56
[60] Ibid, p.59
[61] Unknown author, *German Intelligence Notes On Arnhem Operation*, Summary No. 207, Part 1

reached the beleaguered British and Poles at Arnhem and Oosterbeek, almost nothing that Browning could say or do affected their situation. As Middlebrook comments, "for most of the week Browning had little influence on what was happening to the three airborne divisions he was supposed to be commanding."[62] In reality he was "little more than an observer."[63]

If this seems a harsh assessment of Browning, there is no doubt that the events at Arnhem caused him great personal distress in the years that followed the battle. He too had had serious reservations about Market Garden, believing it rushed and that concepts necessary for the successful use of airborne troops were being dangerously stretched, especially concerning the distance that XXX Corps had to travel to link up with 1st Airborne and the lack of aircraft for lifting. This makes it even more difficult to understand his decision to take so many gliders from Urquhart's first lift. It was his belief that parts of what transpired were his fault. Indeed it would be impossible not to lay some of the blame squarely at his feet. As a case in point, the meeting between Sosabowski, Horrocks, Browning and Major-General Ivor Thomas, commanding 43rd Wessex Division, at Valburg on Sunday 24th September was instrumental in how the battle ended. As events turned out, the Polish General was withering in his assessment of Browning's decisions at this stage, writing "it is incredible that Browning … did not use all his powers to encourage and persuade Horrocks, Dempsey and Montgomery to have a final go… I have often wondered whether

[62] Middlebrook, *Arnhem 1944*, p.412
[63] Warren, *Airborne Operations,* p.179. This quote actually refers to Maj-General William Miley, commander US 17th Airborne Division during Varsity, but is equally applicable to Browning on Market Garden.

[Montgomery] would have endorsed Horrocks's plan to carry out a major assault and then, perhaps, the Battle of Arnhem would have been turned into a victory instead of a defeat."[64]

The extremely frank exchange of opinions between the two generals that occurred later that day, when he "forcibly told Browning what he thought of British commanders who carried out a major operation across a series of wide rivers without bringing forward a good supply of boats"[65] was the final nail in the coffin as far as relations between the two were concerned. However correct Sosabowski's opinions, Browning did not want to hear them and shortly thereafter was instrumental in his dismissal from the command of the Polish Parachute Brigade.

Another area responsible for much that ensued at Arnhem was the distance that the troops were landed from their target. Two factors influenced planning here. The confusion caused by the highly dispersed night landing in Normandy meant that only a day landing was considered for Market Garden. Furthermore, it had been established as a central concept for some time within airborne forces that troops, whether landing by parachute or glider, **must** land within a close distance of the target, normally five miles at the most. Yet any LZs/DZs close to the bridge were small in size and flak defences in the area were cited by the RAF as 'heavy'. Regarding this latter point, one RAF officer ruefully admitted "in point of fact, there was little accurate information as to the location of active flak… The

[64] Middlebrook, *Arnhem 1944*, p.417
[65] Ibid, p.416

overriding factor was the ability of the glider pilots to get down in enclosed country … The experience of US glider pilots on D Day was still fresh in people's minds. The presence or otherwise of flak was incidental."[66]

Whatever the exact reason, the LZs and DZs chosen were located some distance west of Arnhem, further than a central concept of airborne planning would normally tolerate. This is often highlighted as a most serious mistake, and indeed it was, given the relatively slow speed of movement which the British were capable of. However, what compounded this into such a significant error was that most German troops in the local area reacted quickly, positively and aggressively. Indeed, it would be no exaggeration to say the speed of the German reaction was incredible.

Although surprised by the arrival of the British and unsure initially as to the exact location and target of the landings, they either advanced towards the general area of the landings or set up blocking positions at vital spots on the approaches into Arnhem. One German officer, SS-Captain Sepp Krafft, explained the importance of attacking "the [airborne] enemy immediately with any forces available, not with any hope of destroying him but to disturb and disrupt his preparations for battle." With the small force available to him, Krafft knew he could only act as a delaying force in order "to secure time to prepare counter-measures."[67] These blocking positions and scattered attacks inflicted such delays on most of 1st Parachute Brigade as they moved towards the Arnhem

[66] Unknown RAF officer, quoted in Otway, *Airborne Forces,* p. 293
[67] Kershaw, *It Never Snows in September,* p. 312

bridge that the British plan started going seriously awry within the first day. Only one unit, Frost's 2nd Parachute Battalion, managed to bypass the German blocking position and reach the bridge. They were ultimately to be destroyed there, subjected to incessant attacks on all sides by armour, infantry, artillery and mortars, deprived of any reinforcements or resupply due to their encirclement and literally blasted into submission.

The extraordinarily rapid and violent response from German forces, all caused the ambitious plan for the British troops at Arnhem to start falling apart very quickly. The arrival of 4th Parachute Brigade in the second lift on the afternoon of 18 September had little effect in changing this situation and merely reinforced an extremely dire predicament. The die was cast for 1st Airborne Division.

The lack of speedy relief by XXX Corps assumed a great importance, from which several other issues became increasingly significant, as the battle at Arnhem continued. It had always been agreed that lightly-armed airborne troops needed ground forces to relieve them within a short period of time if they were not to be destroyed or defeated. Just as many argued that the Arnhem LZs and DZs were too far from the target, one of the central arguments against using airborne troops as far forward as Arnhem was that it was too distant from the ground forces that would supposedly relieve them within two days. 1st Airborne Division was nearly 60 miles in front of the positions of XXX Corps when they landed north of Heelsum. Browning's immortal phrase of 'a bridge too far' began to assume greater reality as the drive by XXX Corps became delayed, sometimes

due to German activity and sometimes due to a lack of urgency on the part of the British. Whatever the reasons, the length of time which the British airborne troops were expected to hold out for until relieved expanded. Where this became a critical issue was in five areas; ammunition, food, rest, reinforcements and resupply.

British troops became worn down through lack of sleep and food. Attacks continued incessantly. More importantly, their ammunition became critically short as aerial resupply proved tragically ineffective, in spite of the Herculean efforts of resupply aircraft. Finally, the British were never able to land enough reinforcements in any of the two following lifts, as opposed to the ever-increasing numbers of German troops, to regain the initiative. This proved decisive in tipping the favour increasingly in favour of the German forces ranged against them, especially as casualties mounted within the airborne perimeter and at the bridge.

One point in particular is worth elaborating on. If there is one thing virtually every airborne veteran from Arnhem is agreed upon, it is the unparalleled valour of the crews of the resupply aircraft. Urquhart was moved to write of one Dakota, that belonging to Flight Lieutenant David Lord, which crashed on 19 September, after making two resupply runs. "We were spellbound and speechless … I daresay there is not a survivor of Arnhem who will ever forget, or want to forget, the courage we were privileged to witness."[68] Lord was subsequently awarded the

[68] Urquhart, *Arnhem,* p.90

Victoria Cross. Tragically, of the 390 tons of various supplies dropped that day, only 31 tons (less than 8%) was recovered by the British. The rest fell into enemy hands. Throughout the battle, high losses in resupply aircraft (over 21% on one day) and the inability to communicate with the RAF meant less than 8% of all supplies dropped at such cost were retrieved by the airborne soldiers. This was one of the most important factors in crippling the ability of 1st Airborne Division to fight as effectively as it could, something the Germans were only too aware of.

The eventual withdrawal from Oosterbeek on 25 September drew the nine day battle to a close. Arnhem itself was not finally liberated until April 1945, a shell of the city it had been before the war. The central causes of the defeat have been examined in detail for many years but, as previously mentioned, the failure to abide by four core concepts of intelligence, concentration, closeness to target and rapid relief, all had tragic consequences. Many other reasons also affected the outcome of the battle. Warren highlighted that Market Garden was "unique as the only large … airborne operation during World War Two for which there was no training program, no rehearsal, almost no exercises, and a generally low level of tactical training activity,"[69] something which stands in marked contrast to preceding airborne operations on D-Day and Operation Varsity after it.

One could also highlight Browning's removal of 38 gliders from Urquhart's first lift, failures with communication, not enough boats being available to launch a

[69] Warren, , *Airborne Operations,* p. 100

large-scale assault once XXX Corps reached the Lower Rhine, the lack of resupply, the German ability to improvise ad-hoc battle groups and their rapid reinforcing of troops and especially armour at Arnhem, the delays affecting XXX Corps in the south, particularly around Nijmegen and so on. What is certain is that, even though some factors fall outside the concepts of how airborne forces should be used, the sum of all these elements "spelt the doom of 1st British Airborne Division."[70]

Even though the situation in September 1944 was very different to that of June 1944, Allied commanders discovered to their cost that airborne forces were not a panacea to reinvigorate a stalled advance and that the German forces which had appeared on the verge of total collapse were far from finished. Whilst no longer capable of final victory, many German commanders were still capable, if suitably supplied, of inflicting punishing reversals on Allied mistakes. In spite of this, the bold and imaginative plan behind Market Garden, had it succeeded, would almost certainly have dramatically shortened the war. In the opinion of General Günther Blumentritt, then Chief of Staff to the German Commander-in-Chief on the western front, "there were no German forces behind the Rhine, and at the end of August our front was wide open." Such a breakthrough, had it succeeded, would have undoubtedly altered the post-war map of Europe. One German was even of the opinion "that Germany's biggest disaster of the war was to win the Battle Arnhem."[71] It was a gamble that so nearly paid off.

[70] Kershaw, *It Never Snows in September,* p.314
[71] Ibid, p.442

Urquhart's report, finished in January 1945, eloquently summed up the feelings of most of those who served at Arnhem. "The losses were heavy but all ranks appreciate that the risks involved were reasonable. There is no doubt that all would willingly undertake another operation under similar conditions in the future. We have no regrets."[72] The tragedy was, as the historian Dr. John Warren noted, "All objectives save Arnhem had been won, but without Arnhem the rest were as nothing. In return for so much courage and sacrifice, the Allies had won a 50-mile salient – leading nowhere."[73] A second chance for an airborne operation to cross the Rhine would emerge as the war dragged on into 1945.

[72] Urquhart, *Arnhem,* p. 205
[73] Warren, *Airborne Operations,* p.146.

Chapter III. Operation 'Varsity' 24 March 1945.

Plans, Concepts and Controversies.

The next major Allied airborne attack took place almost six months to the day after the fighting at Arnhem had drawn to a close and was again focused on attempting to cross the Rhine. The airborne component for the Allied crossing of the Rhine in March 1945, Operation Varsity, saw the last major use of airborne forces in the European theatre and indeed in World War Two. This operation was significant in several ways and marked the continued evolution of not only British but also Allied airborne forces. Of greatest significance, in the space of just a few hours two complete airborne divisions were landed north of Wesel in support of the crossing of the Rhine by the British 2nd Army. It was, and still is, the largest single landing of airborne troops in one location and on one day ever. Larger numbers of airborne troops had been dropped in Normandy and in Holland in 1944 but these had been spread over several days and had involved several lifts, something which allowed the multiple use of carrier and tug aircraft. Transporting all the airborne troops in one go stretched the abilities of the RAF and USAAF to the very maximum and meant a third airborne division, the US 13th, could not be used.

By way of background to Operation Varsity, the various reports from the survivors of 1st Airborne, 38 and 46 Groups RAF and XXX Corps all highlighted previously mentioned conceptual, tactical and strategic errors in the planning and

implementation of Market Garden. Even more illuminating were documents captured from the Germans in December 1944. These exposed the German view of Market Garden and the reasons for their success. All were closely analysed and changes were implemented where considered appropriate. The lessons of Sicily, Normandy, southern France and Holland may have starkly showed the limitations of such troops but it was impossible for any keen analyst not to be also aware of how significant their use had been on occasion. It is entirely understandable why Montgomery wanted to use them in his second attempt to cross the Rhine.

Between Market Garden and March 1945, Allied airborne troops, with the exception of SAS units, were only used in a ground role. Most famously, the troops from the British 6th, US 82nd and especially the US 101st Airborne Divisions were rushed to the Ardennes and employed in blunting the final German offensive of the war, most commonly known as the Battle of the Bulge. After the battle finally ended in January 1945, all airborne units were withdrawn and sent to prepare for any future airborne tasking. That moment came for the 6th and US 17th Airborne Division in March 1945. At this stage, Montgomery's 21st Army Group was closed up on the western bank of the Rhine and he planned an extensive set-piece attack from land and air to cross it. These attacks were code-named Operations 'Plunder' and 'Varsity' respectively. Planning for the airborne component extended as far back as 7 November 1944, when FAAA published its first 'Staff Study' of Operation Varsity.

Further south, and much to Patton's intense delight, the troops of Hodges' First US Army and his Third US Army had already crossed the Rhine at Remagen (7 March 1945) and Nierstein/Oppenheim (22 March 1945) respectively. Nevertheless, it was northern Germany that offered greater promise. As one German General said, "He who holds northern Germany holds Germany."[74] Regardless of the achievements of the Americans, the British crossing of the Rhine would help expedite a rapid push into the industrial heartland of Germany through terrain much better suited to large armoured forces than further south.

Extremely mindful after the 'Battle of the Bulge' of the risks to flanks and with the recent airborne experience of Arnhem still dominating the minds of Allied commanders, the concepts behind using airborne forces had altered. There were two fundamental changes involved in Operation Varsity when compared to any previous airborne landing. First, the two airborne divisions were to be landed complete, side by side and only a few miles away from the Rhine and the attacking Allied troops involved in Plunder. Second, the troops would be landed right on top of the enemy, thereby negating both a prolonged march to an objective and also the Germans' ability to organise a coherent defence before the link-up with ground forces or other neighbouring airborne units could be achieved.

The planning for the use of 6th and 17th Airborne Divisions on Varsity was ultimately directed towards disrupting any German resistance in the area of the

[74] Clark, *Arnhem*, p.19

river crossings and preventing any reinforcements from attacking the ground forces' bridgehead. For 6th Airborne in particular, their mission was the seizure, clearance and retention of the high ground north-west of Wesel, the village of Hamminkeln and the capture of three road and railway bridges across the Issel River. In outline, the 3rd and 5th Parachute Brigades were to be landed to the west and north-west of Hamminkeln between 10am and 1020am, followed by 6th Airlanding Brigade some minutes later. At the same time, 17th Airborne Division would land a short distance to the south. With a maximum distance of approximately five miles separating the most northern British paratrooper from the most southern US paratrooper, it was an extremely concentrated mass of nearly 17,000 airborne troops.

Further lessons were also implemented. To prevent any possibility of the airborne forces being isolated and destroyed, they would not be landed until such time as the ground attack (Operation Plunder) had successfully established themselves across the Rhine. Furthermore, almost all the airborne troops would be in range of the copious numbers of artillery pieces of all calibres dug in on the west bank of the Rhine from the moment they landed. Almost two hundred guns were to be used for direct support by Artillery Forward Observers landing with 6th and 17th Airborne, with just over half going to the British and the rest to the Americans. It was a colossal amount of artillery firepower available 'on call'. When combined with another recent development , the newly created 'Forward Visual Control Parties' (FVCP), whose job it was to direct close support fighter

aircraft on to targets, it meant that the lightly-armed 6th Airborne had a unprecedented increase in firepower available to them.

Whilst the river crossing and airborne attack fell directly under the command of General Miles Dempsey's 2nd Army, 'Plunder Varsity' was very much a Montgomery showpiece, something which showed in the huge accumulation of stores, ammunition, equipment and men in the two weeks prior to the attack. In marked comparison to Patton's crossing of the Rhine on 22 March 1945, where he "sneaked a division across"[75] across, Montgomery's affair was representative of the greater number of German forces facing him and was planned, deliberate and comprehensive. It also ultimately involved a delay of some weeks.

The German forces facing the oncoming Allied assault along that part of the Rhine were not oblivious to the probability of airborne forces being used. General Schlemm, commanding the German 1st Parachute Army, had "only a vague idea of what was facing [him]"[76] but most German commanders agreed "the temptation for Allied commanders to use airborne troops would be too great."[77] They identified that parachute and glider operations in the area between Wesel and Emmerich were the most likely and planned, with the meagre resources available to them, how they would try and deal with such attacks. The options available to them were extremely limited, such was the Allied superiority in artillery and the ever-present threat of ground attack aircraft.

[75] Charles Whiting, *Bounce The Rhine*, (Guild, Avon, 1985), p.85
[76] Ibid p.279
[77] Ibid, p.281

Nevertheless, 114 heavy and 712 light anti-aircraft guns[78] were installed in the area where Varsity was to take place and it was the most worrying and feared aspect for airborne planners.

The cautious nature of Operation Plunder Varsity came in for a great deal of criticism from some American commanders, particularly Patton, and from various historians since. There were no such criticisms from the most senior German commander facing Montgomery. Field Marshal Kesselring, the newly-appointed overall German commander of her defences in the west, was complimentary about Montgomery's plan and preparations, saying, "The technical preparations were exemplary … and the massing of forces was commensurate with the undertaking and the Allies' resources."[79] It was a highly co-ordinated and complex attack, fully cognisant of the fact that there would be no toleration of another Arnhem, and aimed to defeat the enemy through the use of well-briefed and equipped troops being launched into battle in overwhelming numbers. On paper at least, Operations Plunder and Varsity formed an impressive combined effort to 'unhinge' the German Rhine defences between Wesel and Rees and so enable rapid Allied penetration of northern Germany.

In recent years, Varsity has also attracted increasing attention due to the very high losses sustained during its execution. In contrast with the relatively light losses of the ground component that crossed the Rhine by boat, the losses to the airborne component were extremely severe. In the space of less than 24 hours,

[78] Tim Saunders, *Operation Varsity,* (Pen & Sword, Barnsley, 2008), p.33
[79] Clark, Arnhem, p.280

6th Airborne lost nearly fourteen hundred men killed, wounded or missing[80] out of the seven thousand plus men who were airlifted into battle that morning. It was a casualty rate that was substantially higher than at Arnhem. This has led some historians to question whether the operation was a suitable task for such a highly trained and valuable division. Max Hastings called it a "folly for which more than a thousand men paid with their lives – almost as many as 1st Airborne lost killed [in nine days] at Arnhem."[81]

This point of view notwithstanding, Operation Varsity should have been the culmination of all British airborne experience up to that point in the war. However, in spite the lessons from all previous airborne operations being uppermost in the minds of planners and commanders, the landings near Hamminkeln proved anything but simple and straightforward. The high casualty figures and the significant losses and damage to gliders, transport and resupply aircraft that ensued were certainly not the highpoint that Allied commanders hoped for and indicated that many lessons still remained to be learned. Nevertheless, all objectives were quickly achieved and it was hailed by Brereton as a "tremendous success."

The most significant aspects when examining Varsity today revolves around two issues. The first issue is the question of whether or not airborne troops should have been used at all. On the one hand, used properly, there was little doubt that airborne troops could achieve tactical and strategic success. By 1944, any

[80] 347 killed, 731 wounded, 313 missing. Otway, *Airborne Forces,* p.319
[81] Max Hastings, *Armageddon,* (Macmillan, London, 2004), p.431

major Allied attack often involved an airborne component and the crossing of the Rhine was to prove no exception. However, it is this mindset that is held to open criticism today. Hastings' theory of "airborne divisions existed and consumed rations [therefore] they had to be used"[82] may be simplistic in outline but might contain a great deal of truth.

A salient point is made by Clark when he states that "there is little doubt that … the ground forces could have taken the objectives, but Monty did not want to take the chance that they would not."[83] It is this point that ultimately has become the hub for the majority of Varsity critics, who feel that so many men were lost and such effort was expended for a non-essential operation. They argue that the ground forces involved could have achieved the same result, perhaps at a lower cost. Even Brigadier Hill, commanding 3rd Parachute Brigade, had reservations about how his troops were to be used on Varsity. He described, as part of the fallout from Arnhem, "the temptation to be overly protective of [airborne] troops which, if they are devoid of surprise and audacity, lack a reason for being."[84]

The second issue is that "the casualties incurred by the airborne assault were out of all proportion to [their] contribution."[85] There is no doubt that the overall success of Plunder Varsity was down to the staggering level of preparation, both in terms of training and resources, which preceded the crossing. Airborne troops did make a significant contribution to the crossing but the attempt to land gliders

[82] Hastings, *Armageddon,* p.431
[83] Clark, *Arnhem,* p. 336
[84] Ibid, p.282
[85] Hastings, *Armageddon,* p.431

before the LZs had been secured was to prove a grave error of judgement, something acknowledged in all post-operational reports.

One figure from the past might undoubtedly have said, 'I told you so.' John Rock, the father of much British airborne development in 1940 and 1941, would have been horrified at the way 6th Airlanding Brigade was used. It was a complete violation of the principles behind using gliders he had laid down earlier in the war. He had envisaged two roles for glider-borne units, neither of which involved large-scale direct assault. As far as he was concerned, they could either be used for specific coup de main attacks, most famously seen at Pegasus Bridge on D-Day and at Eben Emael in 1940, or for "the rapid reinforcement of ground already taken and held."[86] He expressed this opinion most unequivocally when he wrote that direct glider attack in daylight would probably be "about as futile as charging the enemy in a fleet of RASC three-tonners."[87]

As a result of his death in October 1942, Rock was not privy to the enormous developments within airborne forces that had taken place by March 1945. Progress had been made, often at great cost, in equipment, concepts and experience Nonetheless, his comments, written over two years previously, were borne out by the experience of the glider landings at Varsity.

With varying degrees of amendment, this policy had remained as a central concept for glider operations. At Sicily, the gliders had been protected by

[86] Smith, *History of the GPR,* p. 31
[87] Ibid, p.31

darkness. At Normandy most gliders landed on ground already held. At Arnhem, the gliders of the first lift had landed with almost complete surprise (although the gliders of subsequent lifts had an increasingly tough time on arrival). However, at the Rhine, all 6th Airborne's gliders were to land in an area where it was quite apparent that the Germans were expecting an assault.

One staff officer of IX TCC "had warned that the antiaircraft fire might inflict losses such as the command had never before encountered."[88] It was to be a prescient fear, particularly concerning those flak guns that were either mobile, remained unidentified prior to the commencement of Varsity or were classified as light (and therefore fired prodigious amounts of ammunition at the low-flying gliders and aircraft). They were to inflict heavy punishment on the airborne troops.

A report on the Varsity landings, written by the senior officer from the Glider Pilot Regiment (GPR) present, echoed Rock's words and highlighted the suitability of gliders for coup de main landings but the unsuitability, even of the new Mark II Horsa, of landing non-infantry loads, especially petrol or ammunition, in the midst of a contested landing zone.[89] Similar opinions were also expressed by Brigadier Poett, commanding 5th Parachute Brigade. In his post action report, he commented that "under the condition existing during Op. Varsity, 1 to1½ hours

[88] Warren, *Airborne Operations,* p.167
[89] Operation Varsity, Glider Pilot Regiment Report, p. 49 (Conclusions) March 1945. Airborne Forces Archive, Duxford.

would have been a suitable interval between the arrival of parachute troops and gliders."[90]

Three other factors compounded these issues into an even more serious state of affairs. First, such had been the scale of losses among glider pilots at Arnhem that only 714 pilots of all ranks were left after Market Garden had finished, far short of the figure needed for any subsequent airborne operations. Consequently some 1,500 pilots from the RAF were transferred as replacement glider pilots. One can only imagine the horror with which many budding bomber pilots gazed upon their plywood, engineless aircraft. Varsity was their baptism of fire and although they generally performed well, mistakes were inevitable.

Second, in the weeks prior to the landing, considerable reconnaissance had been carried out in order to identify all enemy positions, especially those containing flak defences. Once operations commenced, a combination of Allied artillery and medium bombers were used to 'soften up' all pre-identified enemy artillery/flak guns and defences in the area of Plunder Varsity. What proved to be decisive was the number of mobile and previously unrecorded flak positions. They were to take a heavy toll on the aerial armada once over the Rhine.

[90] 5 Parachute Brigade Operations In Germany, March-May 1945, Part I, p. 4 (conclusions) http://www.paradata.org.uk/media/859?mediaSection=Post-combat+reports&mediaItem=3746 (accessed 17 August 2010)

Third, the approaching air armada was between six and ten minutes early when Varsity commenced. From such a seemingly irrelevant statistic, a considerable effect on events resulted. An 'anti-flak bombardment' was programmed to fire on all known or suspected position from 0930 to 1000 hours. That meant it would cease firing once the lead aircraft were on the verge of dropping their first waves of paratroops. In reality, the 544 guns firing this task still had a third of their fire missions to complete when they were forced to cease firing. This resulted in the "anti-flak bombardment … only [being] effective for the leading waves of aircraft … thereafter the enemy could shoot undisturbed."[91]

The tragedy that was about to unfold, just as Rock had warned, meant that those aircraft least able to contend with flak, the Horsas and Hamilcars, were about to get almost all surviving flak defences directed at them. Unfortunately, most of these guns were covering the very landing areas about to be utilised. Those gliders used for coup de main attacks to seize both sides of the road and rail bridges over the Issel River were mostly successful. Other gliders landing elsewhere, for the first time tactically rather than en masse[92], suffered appalling losses and damage - especially the Hamilcars. Ninety per cent of all 6th Airborne's gliders that took off crossed the Rhine but "seventy-five per cent of [these] were hit by flak or small arms fire."[93] Only eighty eight were later found to be undamaged on the LZs. The combination of smoke, dust (from an Allied bombing raid shortly before and the artillery fire), heavy enemy fire and release

[91] Otway, *Airborne Forces*, p. 304
[92] "This entailed descending directly on top of the enemy at the spot required by the Commander concerned, from company level upwards, whilst fitting in with the overall plan." Smith, *History of the GPR*, p.127
[93] Ibid, p.129

heights being almost a thousand feet higher than planned, meant many gliders, attempting to land in the most difficult of circumstances, either crashed due to landing too fast or to the pilots being killed or wounded on approach. Even when landed, as one German soldier recounted, "our 20mm explosive shells had a terrible effect on the troops in the gliders, particularly once they stopped."[94]

The subsequent losses in equipment carried inside the gliders was so severe that it was only the aggressive spirit of many of the airborne troops, the overall weakness of the German defences in the face of the concentrated mass of the two airborne divisions, the closeness of the advancing troops from 2nd Army and the "liberal scale of insurance"[95] of extra equipment that prevented even greater losses.

In spite of the carnage unleashed on 6th Airborne that day, by 3pm all objectives had been taken and troops everywhere were consolidating their positions. Those counterattacks launched by the Germans failed to break the airborne perimeter, although one came perilously close to doing so and forced the deliberate destruction of a captured bridge. By eleven o'clock the following morning, elements from 2nd Army had linked up with all units of 6th Airborne. Even though the reality had been extremely bloody, 6th Airborne had fulfilled all expectations.

It is because of this juxtaposition of success and loss that Varsity remains the enigma that it does. On the one hand, it was immensely well planned,

[94] Saunders, *Varsity,* p.95
[95] Ibid, p.318

completely successful and contributed significantly towards one of the most risky of all military operations, an opposed river crossing. Espousing Fisher's famous phrase that 'moderation in war is imbecility', Montgomery made use of the overwhelming forces available to him. Indeed, it is difficult to believe that any of the ground forces were anything other than relieved to have airborne troops on hand to subdue enemy defences.

On the other hand, there is no doubt that the airbornes' losses were extremely heavy and the river crossing could have been made without their use. How much greater the ground forces' losses would have been without their involvement remains open to conjecture. Things had not gone totally to plan and many lessons were learned, especially regarding the use of gliders. Again these were discerned at a dreadful price. However, the losses were not caused by stupidity or incompetence. The error in using gliders as they were was a reaction to the events of Arnhem and was the main lesson to emerge from Varsity. Likewise, the early arrival of the airborne armada, combined with the non-detection of so many anti-aircraft guns was a confirmation of Clausewitz's famous phrase that "war is the province of chance."

What was undeniable, regardless of any controversy surrounding their use or casualties sustained, was that British airborne troops had again demonstrated their tenacity and courage in the face of great adversity.

Conclusion

By wars end in August 1945, some seventeen British parachute battalions had been raised as well as a myriad number of other airborne combat and support formations, without which no airborne battalion, brigade or division could operate. All this was a far cry from the original efforts to raise an airborne force in June 1940. The battles they fought, particularly at Arnhem, remain a lasting testimony to the men who formed their ranks, even if the circumstances and outcomes were not always as they envisaged.

The concepts and tactics which airborne forces developed continued to modify and evolve as lessons were learned. Each airborne operation was indelibly stamped with the lessons of the preceding one, as Husky influenced D-Day, D-Day influenced Arnhem and Arnhem influenced events at Hamminkeln. All provided their share of bitter experience and the risks inherent in using airborne troops became more than evident during the war.

However, airborne forces offered unparalleled opportunities not available to previous commanders. Field Marshal Alexander, commenting on the concept and possible future of airborne forces, wrote that "commanders, throughout history, have always been seeking the open flank round which to launch their decisive operations."[96] Airborne operations offered them just such an opportunity. They were able to undertake tasks that were simply impossible for

[96] Otway, *airborne Forces*, p.449

other forces. Their continued establishment in so many armed forces around the world is testament to this basic premise. Alongside such opportunities ran the element of great vulnerability. As Wavell said, "Battles and wars are only won by taking risks."[97] In this respect, it was indeed fortunate that Churchill was Prime Minister and that the blinkered attitudes of some commanders, especially those within the RAF, were not heeded. It is impossible to say what results might have been realised earlier in the war if the RAF had been more cooperative. In the final analysis, British airborne forces lacked a similar aircraft to the German JU-52 for most of the war and large scale operations only became truly possible with the arrival of the Dakota in 1944.

The battle at Arnhem exposed serious flaws in the way in which 1st Airborne Division was utilised and the overall concept of Market Garden itself. One can understand the bitterness which many felt, especially towards Montgomery, the man ultimately responsible for the battle. Yet it is also impossible to disagree with one former glider pilot, Joe Kitchener, who said simply, "It seemed a good idea at the time."[98] The reasoning behind Market Garden was eminently admirable. Had it succeeded, it was indeed highly possible that the war might have finished by the end of 1944. Browning, Brereton and Williams deserved much greater censure for the failure than they ever received and the Germans much greater praise.

[97] Dover, *Sky Generals,* p.194
[98] Middlebrook, *Arnhem,* p.452

Regarding Varsity, it is impossible to agree with Hastings that the operation was a 'folly'. It is Kesselring's view which is far more appropriate. Operation Plunder undoubtedly could have gone ahead without an airborne element and it is a distinct possibility that fewer losses might have been sustained had it done so. Nevertheless, Varsity was a total success in spite of its high price. Given the experience of Arnhem and the dangers of an opposed river crossing, Montgomery can hardly be blamed for using overwhelming force. What can be questioned is the manner in which 6th Airlanding Brigade was used. This was an error and one which in all likelihood would not have been repeated had the plans for ARENA ever been realised.

In conclusion, Market Garden and Varsity were very different operations and debates will no doubt continue to rage about both battles. What is incontestable is that the character and fortitude of airborne forces in the face of considerable adversity was displayed to a remarkable degree on both operations. The 'dust and sweat and blood' may be long gone but the conduct of the airborne troops who fought at both battles will continue to generate the greatest admiration and respect.

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