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# The Last German Victory: Combat Doctrine and Tactical Performance in Operation Market Garden, September 1944

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UNIVERSITY OF CALGARY

The Last German Victory:  
Combat Doctrine and Tactical Performance in Operation Market Garden, September 1944

by

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A THESIS

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## **Abstract**

This thesis reevaluates Operation Market Garden, the failed Allied airborne invasion of German-occupied Holland in September 1944 by comparing the combat doctrines and practices of the British and German forces that engaged in the campaign, particularly with regards to command and control and the employment of firepower, and seeks to assess the degree to which each force was actually suited to the circumstances that they faced during the operation. The study concludes that German combat doctrine and training, based around a highly decentralized and proactive command ethos and a high level of small-unit tactical proficiency, was a major factor in their ability to effectively cope with the unexpected Allied attack and the confused combat situation it created. Conversely, the British forces were hampered by the fact that their own doctrine, based around rigid centralized control, cautious set-piece battle planning and the maximal use of artillery and aerial firepower, proved itself ineffective in adapting to the confused and fast moving situation that their own surprise offensive created, ensuring that they were unable to achieve their objectives.

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## CHAPTER 1: INTRODUCTION

Early in the afternoon of the 17<sup>th</sup> of September, 1944, just after the fourth anniversary of the beginning of the Second World War, the skies over south-eastern Holland were filled with a massive armada of over 4,300 aircraft belonging to both Great Britain's Royal Air Force (RAF) and the United States Army Air Force (USAAF). At the heart of this air fleet, protected and supported by 1,240 fighters and 1,113 bombers, were 1,534 transport aircraft and 491 cargo gliders carrying approximately 16,500 men of the 1<sup>st</sup> Allied Airborne Army. This was the largest single force of airborne soldiers ever to be deployed in combat – a force that would be dropped and landed shortly after 1300 that day near the Dutch towns of Eindhoven, Nijmegen, and Arnhem, in pursuit of the Western Allies' latest offensive effort against the forces of Nazi Germany, Operation "Market Garden."<sup>1</sup> The operation was sent off with high hopes and expectations from the Allied leadership, particularly the operation's chief architect, the newly promoted Field Marshal Bernard Law Montgomery, commander of the British 21<sup>st</sup> Army Group, to which the 1<sup>st</sup> Allied Airborne Army was attached.

The primary purpose behind Montgomery's plan was to breach the barrier of the Rhine River, the last major geographical obstacle between the Allied forces and an invasion of Germany itself in the wake of their victory over the German *Westheer* (Western Army) in France the previous month. The forces of the airborne army were to capture and secure key bridges and other crossing points over all the water obstacles along the main road leading north from the southern Dutch border to the city of Arnhem on the far side of Lower Rhine (the northernmost tributary of the Rhine proper). This landing was to provide a secure "carpet" of occupied territory that would allow the forces of the British 2<sup>nd</sup> Army, led by the XXX Corps, to quickly rush through to the banks of the Zuider Zee in northern Holland and establish a bridgehead behind the line of both the Rhine and the defences of the *Westwall* fortifications along the German border.<sup>2</sup> From this bridgehead, Montgomery hoped to launch a final, decisive, advance into

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<sup>1</sup> WO 205/873 *Report on Operations "Market" and "Garden," September to October 1944*, pp. 2-3.

<sup>2</sup> WO 171/366 *War Diary HQ 1<sup>st</sup> Airborne Corps – Operation Market Operation Instruction No. 1*, pp. 1-6.

German's primary industrial region, the Ruhr, the loss of which would cripple German war production and bring about a swift end to the prolonged conflict in Europe.<sup>3</sup>

Market Garden developed out of the promising, but difficult situation that the Allies found themselves in during the early autumn of 1944. Operation Overlord, the Allied invasion of France via Normandy, had, after months of hard fighting against a skilled and determined foe, finally overcome the forces of the German 7<sup>th</sup> Armee and 5<sup>th</sup> Panzerarmee by the middle of August, with Allied forces breaking out of their beachhead south of St. Lo on the 25<sup>th</sup> of July, sweeping into the German rear and eventually achieving a partial encirclement of the remaining German forces around the town of Falaise. Though the trap closed too slowly, allowing large numbers of German troops to escape, the Allied victory still effectively reduced the great bulk of German forces in Western Europe to a tattered and panicked mass of fugitives fleeing back towards the German border in a near complete rout.<sup>4</sup> Though the Allies quickly followed up the German retreat, liberating virtually the whole of France and pushing through Belgium to the borders of Holland and Germany itself, they soon found themselves victims of their own success.<sup>5</sup> With most of the French ports along the Atlantic Coast either demolished by the retreating Germans or still occupied by stay-behind garrisons, the Normandy beaches and the Norman port of Cherbourg remained the Allies only available facilities on the continent for unloading supplies shipped over from Great Britain. Thus, with their main supply points over 300 miles behind the front lines by the beginning of September, and with the French rail networks still largely out of action from the Allies' pre-landing air interdiction campaign, Allied forces all along the line began to grind to a halt in the face of severe shortages of the fuel, ammunition, and other supplies needed to continue their offensive.<sup>6</sup>

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<sup>3</sup> WO 205/873 *Report on Operations "Market" and "Garden," September to October 1944*, pp. 1-2; Field-Marshal The Viscount Montgomery of Alamein, *El Alamein to the River Sangro/Normandy to the Baltic* (New York: St. Martin's Press, 1948), pp. 312-14.

<sup>4</sup> Montgomery, *El Alamein to the River Sangro/Normandy to the Baltic*, p. 281.

<sup>5</sup> Sir Brian Horrocks, *A Full Life* (London: Collins, 1960), pp. 195, 203.

<sup>6</sup> Montgomery, *El Alamein to the River Sangro/Normandy to the Baltic*, pp. 303-4; Dwight D. Eisenhower, *Crusade in Europe* (Garden City, NY: Garden City Books, 1952), p. 326; Horrocks, *A Full Life*, pp. 203-4; A.D. Harvey, *Arnhem* (London: Cassell & Co., 2001), pp. 18-19; Cornelius Ryan, *A Bridge Too Far* (New York: Pocket Books, 1974), pp. 68-70.

As the Allied advance began to lose momentum after victory in Normandy and rapid progress through Belgium, a major dispute over strategy developed among the senior Allied commanders. The Allied Supreme Commander, General Dwight Eisenhower, favoured continuing the original Allied strategy of advancing slowly and steadily along a broad front, keeping as much as possible of the remaining German forces engaged all across the line, preventing them from massing reserves for an effective counterattack and ensuring that no single Allied force got too far ahead of the others and became unduly exposed.<sup>7</sup> Field Marshal Montgomery, however, preferred an alternative strategy in light of the unexpected rout of German forces from France. Montgomery believed that the Allies should take advantage of the complete disarray that the *Westheer* found itself in after their retreat and thrust rapidly forward at a single point, concentrating their efforts to quickly breach the remaining German defences before their army could recover enough to muster effective opposition.<sup>8</sup> Montgomery believed that such a bold, focused thrust, backed by the totality of the remaining Allied supply capacity, might win the war for the Allies by the end of the year, sparing the weary citizens of Great Britain, whose cities were now suffering under attack from Germany's "Vergeltungswaffen-1" (revenge weapon one) flying bombs, another winter of wartime hardship.<sup>9</sup> Naturally, Montgomery also intended that his own 21<sup>st</sup> Army Group would conduct the decisive thrust, ensuring that the often arrogant and vain general, whose ego was still smarting from having lost the command of the whole of the Allied ground forces when Eisenhower assumed the active field command at the beginning of September, would be able to claim the bulk of the credit and glory for the Allied victory.<sup>10</sup>

Eisenhower was, however, largely unmoved by Montgomery's repeated and increasingly vociferous entreaties to alter his strategy. For one, the Supreme Commander was unconvinced that Montgomery's – or any – Allied forces would be able to achieve such a decisive victory so quickly given

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<sup>7</sup> Eisenhower, *Crusade in Europe*, pp. 257, 260, 329; Horrocks, *A Full Life*, p. 193; Guy LoFaro, *The Sword of St. Michael: The 82<sup>nd</sup> Airborne Division in World War II* (Philadelphia, PA: De Capo Press, 2011), pp. 279-80.

<sup>8</sup> Montgomery, *El Alamein to the River Sangro/Normandy to the Baltic*, pp. 290-92, 303; Ryan, *A Bridge Too Far*, pp. 61-65; Horrocks, *A Full Life*, p. 192.

<sup>9</sup> Ryan, *A Bridge Too Far*, p. 62.

<sup>10</sup> Montgomery, *El Alamein to the River Sangro/Normandy to the Baltic*, p. 290; Geoffrey Powell, *The Devil's Birthday: The Bridges to Arnhem, 1944* (London: Buchan & Enright, 1984), pp. 22-23.

the strained Allied logistical situation, and that attempting to do so would simply result in them quickly grinding to a halt in a dangerously overextended position.<sup>11</sup> Furthermore, from a political perspective, Eisenhower was unwilling to halt and divert supplies from the American forces advancing further south to enable the efforts of Montgomery's British troops, knowing that such a decision would face an intense backlash from the American government and public.<sup>12</sup> As such, he ordered Montgomery to instead focus on clearing the still occupied approaches to the Belgian port of Antwerp, allowing that port, which had fallen to the Allied advance on September 8<sup>th</sup>, to be opened to Allied traffic, thus addressing the growing logistical crisis.<sup>13</sup>

To placate the bitterly disappointed Field Marshal, Eisenhower did agree to give his 21<sup>st</sup> Army Group a degree of priority for supplies and also –critically – authorized him to make use of the Allied forces' last remaining strategic reserve, the newly formed 1<sup>st</sup> Allied Airborne Army, to aid in his future operations.<sup>14</sup> Montgomery quickly began formulating several plans to make use of this potentially highly useful asset and, on the 10<sup>th</sup> of September 1944, he met with Eisenhower to again push for his “narrow thrust” strategy, this time offering a concrete plan to achieve his objectives in the form of Operation Market Garden. Though Eisenhower remained dubious of the practicality of Montgomery's wider intentions to push on into the Ruhr once the operation was successful (and thus forbade him from planning such operations in advance), he was quite impressed with the boldness of the plan that the normally-cautious Montgomery had proposed and hoped that it could at least secure a useable bridgehead over the Rhine before winter set in, giving the Allies a useful point of departure when offensive operations resumed in the spring. As such, he enthusiastically approved Operation Market Garden, with its D-Day being set for the 17<sup>th</sup> of September.<sup>15</sup>

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<sup>11</sup> Eisenhower, *Crusade in Europe*, p. 329.

<sup>12</sup> LoFaro, *The Sword of St. Michael*, pp. 282-83; James M. Gavin, *On to Berlin: Battles of an Airborne Commander, 1943-1946* (New York: The Viking Press, 1978), pp. 134-35.

<sup>13</sup> Eisenhower, *Crusade in Europe*, p. 328.

<sup>14</sup> Montgomery, *El Alamein to the River Sangro/Normandy to the Baltic*, p. 294; Ryan, *A Bridge Too Far*, p. 66.

<sup>15</sup> Eisenhower, *Crusade in Europe*, pp. 344-46; Gavin, *On to Berlin*, p. 136.

Despite the hopes of Montgomery and Eisenhower, the scale of the operation, and its innovative combination of airborne and deep mechanized operations, Market Garden was to end in defeat, disappointment, and the deferment of the end of the war in Europe for another seven months. Though crossings across the Maas and Waal Rivers, as well as several major canals, were captured through the efforts of the American 82<sup>nd</sup> and 101<sup>st</sup> Airborne Divisions and XXX Corps, extending the Allied front line all the way up to the Lower Rhine, the Germans managed to hold the Allied forces there, just short of their final goal. Though the British 1<sup>st</sup> Airborne Division, dropped at Arnhem to secure the final bridges over the Lower Rhine, managed to temporarily secure the northern end of the main road bridge, it was soon counterattacked and eventually overwhelmed by the Germans, with less than a quarter of the approximately 10,000 men with which the division had landed escaping across the Lower Rhine on the night of the 25<sup>th</sup>/26<sup>th</sup>.<sup>16</sup> Though the Germans also suffered fairly heavy casualties in the course of the battle, their efforts managed to achieve what was arguably their last true operational level success in the war in the West, defeating a significant Allied thrust that might have unhinged their entire defensive plan. At the same time, German forces inflicted significant casualties upon the Allied forces involved, achieved a notable propaganda coup to boost the morale of their exhausted forces and population, and, perhaps most critically, bought time for the preparation of their large scale counteroffensive plan, which was launched in the Ardennes in December.

Operation Market Garden, and particularly the critical Battle of Arnhem, has been the subject of an extensive amount of both popular and scholarly literature in the decades since the end of the war. A matter of central concern in most works has almost invariably been the reasons for the operation's failure – often seen, in the light of Montgomery's lofty ultimate ambitions for it, as a lost opportunity for the Allies to bring the war to an end months earlier, and thus to avoid the bloody fighting on both the western and eastern fronts in the war's final months and even possibly the prolonged Soviet occupation of Eastern Europe. Most criticism has generally been focused on the specific decisions made by Montgomery and his

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<sup>16</sup> WO 205/873 *Report on Operations "Market" and "Garden," September to October 1944*, p. 5; Martin Middlebrook, *Arnhem 1944: The Airborne Battle, 17-26 September* (Barnsley, UK: Pen & Sword Military, 1994), p. 437.

subordinate commanders both in formulating the plan and in putting it into action, particularly with regards to the plans for the airlift that delivered the airborne troops to the battlefield. Matters such as the decision to divide the drops of the three airborne divisions into multiple waves across three days, or the selection of landing zones for the Arnhem mission that were an average of 8 miles away from the 1<sup>st</sup> Airborne Division's objective bridges have been cited as critical factors in the defeat at Arnhem, effectively wasting the initial surprise the landings achieved and forcing the 1<sup>st</sup> Airborne to have to fight its way through to its objectives with only a limited portion of its total strength. However, the recent and groundbreaking work done by historian Sebastian Ritchie on the Market Garden campaign draws into question the notion that it was flawed detail in an otherwise sound plan that led to Allied defeat. Ritchie, focusing on a detailed examination of the air plans for the operation, effectively argues that the flaws in those plans were less a matter of mistakes in planning as they were the result of unavoidable limitations inherent in conducting an airborne operation of such depth and scale, given the resources available to the Allied air forces. Ritchie points out, for example, that the Allies simply lacked the number of aircraft necessary to drop the whole of the 1<sup>st</sup> Allied Airborne Army in a single effort, and that limits of turn-around time between missions and the lack of proper night-flying training among the Allied transport pilots effectively ruled out multiple drops within a single day. As such, Ritchie draws into question the prevailing idea that Market Garden was a good plan that was foiled only by specific decisions made in executing it, and instead suggests that it was a badly flawed, impractical, and generally unreasonable idea from its very inception, put into action by commanders that either failed or refused to recognize and accept the limitations of the forces under their command in a single-minded and myopic pursuit of what they saw as a fleeting opportunity to win the war at stroke.<sup>17</sup>

This work draws upon the approach employed by Ritchie to question the basic feasibility of Operation Market Garden from another perspective, that is by examining the degree to which the two competing forces involved were actually suited, in terms of their combat doctrine – including their

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<sup>17</sup> Sebastian Ritchie, *Arnhem – Myth and Reality: Airborne Warfare, Air Power and the Failure of Operation Market Garden* (London: Robert Hale Limited, 2011).

training, organization, and equipment - for the unique circumstances and demands that the battle thrust upon them. On one side this thesis looks at the doctrine and capabilities of 1<sup>st</sup> Allied Airborne Army, executing the “Market” (airborne) element of the plan, and those of the British 2<sup>nd</sup> Army that executed Operation “Garden” (the ground advance), and on the other, the forces of the German Wehrmacht (Armed Forces) operating under the command of Army Group B.

This author would argue that the doctrine in use by both sides during the fighting in Holland in September 1944 played a central role in bringing about both the Allied defeat and the German victory. German doctrine, which emphasized principles of highly aggressive leadership based around independent action taken by commanders through the exercise of their own initiative at all levels of command, as well as small-unit firepower and tactical proficiency, ensured that the relatively weak forces available to Army Group B were able to react extremely quickly and effectively to the sudden Allied landings. In doing so they were able to negate the surprise that was so critical to the success of the Allied plan and then outmatch the Allied forces in the scattered and confused fighting that followed, where small-unit initiative and effectiveness was at a premium. Conversely, the Market Garden plan proved to be extremely poorly matched to the capabilities of the Allied, and particularly the British, forces involved. With British successes in the Second World War to date having been achieved largely through the use of carefully laid, cautiously executed, and centrally controlled plans, as well as through an overwhelming level of fire support provided by artillery and air power, Operation Market Garden effectively saw the 21<sup>st</sup> Army Group willingly place their forces at a severe disadvantage in not playing to those strengths. The Allied operational plans depended upon their forces acting with a degree of speed, independent initiative, and tactical proficiency that they had never before displayed – or been prepared to by their doctrine and training – and with only a fraction of the centrally controlled firepower upon which their offensive efforts had come to rely. Ordered to do what was largely beyond the capabilities that had been factored into their doctrine, the Allied forces were understandably unsuccessful, in spite of a determined effort that very nearly snatched an unlikely victory from the jaws of defeat. Essentially, Operation Market Garden saw Field Marshal Montgomery abandon the methods and carefully controlled and maintained conditions that

had just won him and his troops a decisive victory in Normandy, in favour of trying to challenge the Germans on their own terms, in the very circumstances in which they most excelled. Under these conditions, it can hardly be surprising that the Germans managed to gain the upper hand and defeat the Allied thrust.

As such, the outcome of the fighting during Operation Market Garden, though far from predetermined, owed at least as much, and possibly more, to deeply ingrained systemic factors within the two opposing militaries as it did to the specific decisions made by the various commanders involved at the time. It is a truism that armies fight the way that their doctrine and training has prepared them to; as such, it is an absolutely essential factor for commanders to make their plans with careful consideration of such basic factors as what their forces are actually capable of. Unfortunately, as the case of Operation Market Garden shows, all too often in history ambition trumps reality in the plans that political and military leaders make, and, as at Arnhem, it is all too often the ordinary soldier that pays the price of such derelictions of judgment.

In the 75 years since the campaign took place, Operation Market Garden has become the subject of a voluminous body of writing. Beyond the numerous eyewitness accounts of the fighting written by participants ranging from senior commanders to ordinary soldiers, the Market Garden campaign has been a popular subject for historical writing, with an extensive secondary literature that includes both scholarly and more popular works. Among these works are narrative histories of the campaign as a whole, as well as more focused accounts of the various battles that comprised the wider campaign, and of the various military units that waged them. The challenge for any would-be researcher is thus not in finding material, but in sifting through that material to find those works that most usefully contribute to the debates about, and understanding of, the Market Garden campaign.

Perhaps the most prominent sub-set within this literature is the numerous narrative accounts that seek to describe, and occasionally to analyze, the events of the campaign. An in many ways obvious starting point for discussing this literature is Cornelius Ryan's 1974 monograph *A Bridge Too Far*, undoubtedly the best known book on the Market Garden campaign and one which, along with the 1977

film based upon it, has had an immense influence in shaping both public perceptions of the campaign and the scholarly literature and debates surrounding it.<sup>18</sup> This author has not seen a single work on the topic that has not used or engaged with the evidence and arguments presented in Ryan's book to some degree. *A Bridge Too Far* is largely a straightforward, if detailed and in-depth, narrative of the events of the Market Garden campaign, written from both official documents and from information gathered by an exhaustive series of interviews conducted by Ryan with various participants in the campaign, including a selection of commanders, officers, and common soldiers from the Allied and German forces involved, as well as Dutch civilians that were caught up in the fighting. This wide variety of sources not only ensures an engaging narrative, but also provides considerable insight into the inner workings of Market Garden from various perspectives, providing much useful material for a researcher to work with in assessing the way in which the battle was planned and fought and the reasons for its eventual outcome.

Beyond its detailed narrative account, Ryan's work was also one of the first serious efforts to critically evaluate the conduct of the campaign. For the most part, the mostly "official" histories and memoirs that preceded it paid relatively little attention to the campaign, sandwiched as it was between the much larger, more famous, and more successful campaigns in Normandy and the Ardennes. What little coverage there was generally followed the line presented in the memoirs of Field Marshal Montgomery, who described the campaign as "ninety per cent successful," only barely frustrated by circumstances beyond his control.<sup>19</sup> Ryan, in contrast, was highly critical of the planning and execution of Market-Garden, examining both in considerable detail throughout his work to illustrate how numerous errors and omissions by Allied leadership contributed greatly to the operation's failure and the loss of the 1<sup>st</sup> Airborne Division. As part of this critical approach, Ryan made effective use of his numerous sources to not only point out where Allied commanders went wrong, but to actually seek the deeper reasons why they made the decisions they did; though sometimes harsh in his criticisms, he usually made an effort to investigate the context in which decisions were made and the degree to which circumstances and factors

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<sup>18</sup> Cornelius Ryan, *A Bridge Too Far* (New York: Pocket Books, 1974)

<sup>19</sup> Field-Marshal The Viscount Montgomery of Alamein, *El Alamein to the River Sangro/Normandy to the Baltic* (New York: St. Martin's Press, 1948), p. 324.

outside the control of commanders constrained their available options and thus present a more nuanced critique.

On the downside, however, the nature of Ryan's source base also ensures a degree of bias throughout the work. He shows a distinct tendency to "lionize" those figures who contributed most extensively to his research effort, such as the commander of the American 82<sup>nd</sup> Airborne Division, Major-General James Gavin, II SS Panzer Korps commander, General der Waffen-SS Wilhelm Bittrich, and his two divisional commanders, Obersturmbannführer Walter Harzer and Oberführer Heinz Harmel, as well as a handful of senior officers from the British 1<sup>st</sup> Airborne Division. These men are clearly depicted as the "heroes" of the piece, with their contributions and those of the formations they commanded being emphasized at the expense of others. Moreover, Ryan generally seems to accept their accounts of events at face value, with very limited effort at concerted criticism, even where their stories seem to diverge from those presented by other sources; as such, they clearly seem to exercise a disproportionate influence over the story Ryan tells and the conclusions that he makes.

Conversely, those figures that made little or no contribution to Ryan's interviews –such as 1<sup>st</sup> Airborne Corps commanding officer (CO) Lieutenant General Frederick Browning or Generalfeldmarschall Walther Model, commander of the German Army Group B, both of whom died before Ryan began his research – often come off quite poorly, seemingly being made to shoulder the bulk of the blame for the various mistakes, while naturally lacking the ability to defend themselves or the decisions they made in the way that their above mentioned contemporaries so energetically did. Though it is perhaps understandable that Ryan chose to focus on those individuals and formations for which he had the most material, this does result in a somewhat distorted picture of the campaign. Ryan's narrative suggests, for example, that the German side of the battle was waged almost exclusively by the forces of the Waffen-SS, with the efforts of other Wehrmacht formations being underplayed or even denigrated by his (mostly ex-SS) German sources. Ryan also is perhaps a bit too credulous in accepting the post-facto critiques of higher level planning by the field officers that compose the bulk of his source base, such as those made by Major-General Roy Urquhart and Brigadier John Hackett of the 1<sup>st</sup> Airborne Division, both

of whom at times draw heavily upon the benefit of hindsight to criticize decisions made by their superiors as foolish, without accounting for the information those superiors actually had available to them at the time. This also illustrates Ryan's subtle bias towards a "lions led by donkeys" perspective on the campaign, as he is clearly far more critical of the decisions made by the senior leadership on both sides than he is towards those of front line "fighting" commanders or troops.<sup>20</sup> Throughout the book, Ryan proves generally unwilling to attach any real responsibility for the outcome on those actually engaged on the ground, or to make any critique of the way in which they actually fought.

Despite these flaws, Ryan's work still holds up fairly well despite its age. Though more useful as a narrative than an analytical work, the sheer amount of material the Ryan includes, particularly in terms of personal testimonies, ensures that *A Bridge Too Far* is still quite valuable for any researcher. Moreover, the book remains virtually a required starting point for any investigation of the literature surrounding Market-Garden, if only because virtually all subsequent works use or engage with it in some significant fashion, seeking in some way to reinforce, refine, or refute Ryan's conclusions.

Notable among the various works that have followed more or less directly in the path laid by *A Bridge Too Far* are Martin Middlebrook's *Arnhem 1944: The Airborne Battle*, Peter Harclerode's *Arnhem: A Tragedy of Errors*, and A.D. Harvey's *Arnhem*.<sup>21</sup> Middlebrook and Harclerode's works – both published as part of the broad surge of popularly oriented literature on the liberation of North-West Europe that accompanied the 50<sup>th</sup> anniversary of the 1944-45 campaign – are both quite "conventional" in their narratives and interpretations. Both largely follow Ryan's example quite closely in their overall structure, argumentation, sources consulted and conclusions. Middlebrook, in particular, openly states that his book is intended merely to provide a detailed description of the Arnhem fighting to a wider audience, and that he is making no major revisions or revelations in interpreting the campaign. Despite this, his

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<sup>20</sup> "Lions led by donkeys" refers to a perspective (now largely discredited by historians) on the British effort in the First World War, first popularized by Prime Minister David Lloyd-George, that exalted the fighting qualities of the common fighting man while blaming apparently "incompetent" generals for the deadlock and heavy losses suffered on the Western Front.

<sup>21</sup> Martin Middlebrook, *Arnhem 1944: The Airborne Battle, 17-26 September* (Barnsley, UK: Pen & Sword Military, 1994); Peter Harclerode, *Arnhem: A Tragedy of Errors* (London: Arms and Armour Press, 1994); A.D. Harvey, *Arnhem* (London: Cassell & Co., 2001).

work retains a degree of utility for the scholarly reader in its detailed accounts of the numerous small battles fought by the 1<sup>st</sup> Airborne Division around Arnhem and Oosterbeek, which are accompanied by a useful amount of new material derived from interviews with, or written accounts by, junior officers and enlisted men of the division, providing a more detailed and well-supported “soldier’s eye” view of the actual fighting than has previously been available.

Harclerode’s account is largely similar, although with a broader – if less detailed – focus on the events of the wider Market Garden campaign beyond Arnhem and the operating area of the 1<sup>st</sup> Airborne Division. Harclerode does, however, include one major point of revisionism – a former Guardsman himself, he devotes a considerable portion of his work to a defence of the actions of the British XXX Corps – and in particular the Guards Armoured Division, which led its advance during Market Garden – against the criticisms of most previous writers on the campaign, who have charged that the formation conducted its advance with a degree of excessive caution and a lack of urgency that they argue was the major factor in ensuring the 1<sup>st</sup> Airborne Division could not be relieved in time. Harclerode effectively points out the many external factors that limited the speed of XXX Corps’ advance, including a lack of infantry manpower, the extremely narrow frontage in which they had to operate, and a lack of clear knowledge of enemy strength or positions, and thus argues that their slow pace was not simply a matter of timidity or a lack of drive. Thus, while the work breaks little new ground on the campaign as a whole, Harclerode’s effort to explore the wider context behind XXX Corps’ difficulties in the campaign leads the reader to reconsider the way in which factors beyond just command decisions can influence combat operations and thus how the degree to which a combat unit is actually capable of carrying out the orders it is given may matter at least as much as the degree to which those orders were themselves right or wrong in a given situation.

In his 2001 work, A.D. Harvey makes an effort to depart from traditional interpretations of the battle, challenging the significance of some of the factors that Ryan and those who followed him have asserted were decisive in the failure of the operation, such as the choice of landing zones for the 1<sup>st</sup> Airborne Division or the apparent slowness of XXX Corps’ advance. Instead, he attributes the defeat of

the 1<sup>st</sup> Division largely to its inability to muster sufficient fighting power quickly enough to match the rapid German response, largely due to the division's airlift insertion being spread across several days. Though this perception of an imbalance in relative fighting power is indeed a useful insight, Harvey fails to more closely examine possible reasons for it beyond a simple lack of numbers for the British Airborne. Given that the Germans were also severely short in manpower in the decisive first few days of the battle, there seems to be a critical gap in Harvey's explanation for why the Germans were able to gain the upper hand here – one that this paper will seek to address. Furthermore, Harvey's assessment of the overall planning for Market Garden is at times frustratingly inconsistent: though he states early on that he believes that the overall plan was a fairly practical and feasible one, doomed only by a poor operational execution, he suggests at other times that it was excessively ambitious in several respects and all too often failed to match its ends to the available means, particularly in terms of planning for the airlift. This disconnect leaves the reader uncertain as to his actual conclusions on the practicality of the Market Garden plan, which limits the utility of his overall analysis.

One of the most useful of the narrative-style works on Operation Market Garden, however, follows a very different approach from those that have come before or since. Robert J. Kershaw's *It Never Snows In September*, originally published in 1990, is the only major scholarly work in English to make a comprehensive study of the fighting in Holland in September 1944 from the German perspective.<sup>22</sup> Kershaw makes use not only of the relatively little used German archival sources for the battle, but also a number of personal interviews and an extensive collection of private correspondence and testimonies to provide a detailed account that covers both high level German planning and command decision making, as well as "trench level" accounts from front line officers and soldiers to provide a broad narrative of the German experience of the battle. Kershaw examines not only how German units actually fought the battle, but also how they assembled the various improvised forces they employed, using several "case studies" to show the way in which functional combat units were rapidly assembled from assorted groups

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<sup>22</sup> Robert J. Kershaw, *"It Never Snows in September" The German View of MARKET-GARDEN and the Battle of Arnhem, September 1944* (Hersham, UK: Ian Allan Publishing Ltd., 2004).

of stragglers, trainees, and reservists. Though Kershaw's analysis of German combat performance is relatively limited, the very fact that his work delves into largely unexplored scholarly territory ensures that his efforts cannot help but uncover new perspectives and force a reassessment of old conclusions. The most critical of these revisions – the idea that the outcome of Operation Market Garden was as much a matter of what the Germans did right as what the Allies did wrong, forms a critical point of departure for the current work.

With regards to more analytical works on Operation Market Garden, two recent books have made a major contribution to the scholarship on the campaign by opening new fields of inquiry and debate. The first, Sebastian Ritchie's *Arnhem: Myth and Reality*, is perhaps the most significant challenge to conventional interpretations of the campaign that has been written since *A Bridge Too Far*, as mentioned in the introduction to this work.<sup>23</sup> At the core of Ritchie's thesis is the challenge he makes to three "myths" that he sees as having long dominated scholarship on the operation: the idea that airborne operations prior to Market Garden had been almost entirely successful (and thus that its failure was an exceptional and unusual result); the idea that Montgomery's initial plan for Market Garden was a bold and brilliant masterstroke at the strategic and higher operational level, which only failed due to poor execution of those plans at the operational and grand tactical level by less competent subordinates; and the idea that the bulk of the failings in that planning were the fault of the Allied air forces, which are generally accused of ignoring the requirements of the actual combat operations on the ground in forming their plans for both the airlift and air support efforts, preferring instead to prioritize their own concerns and preserve their own forces at the expense of their ground-bound comrades.

Regarding the first myth, Ritchie's detailed exploration of both German and Allied airborne operations in the years prior to Market Garden clearly shows that such operations had invariably been difficult and disproportionately costly undertakings and that they almost never achieved the full degree of success their planners anticipated. For the third myth, Ritchie takes advantage of his expertise in the

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<sup>23</sup> Sebastian Ritchie, *Arnhem – Myth and Reality: Airborne Warfare, Air Power and the Failure of Operation Market Garden* (London: Robert Hale Limited, 2011).

history of airpower and air forces to examine the plans made by the air forces for Market Garden in greater detail and depth than any previous historian has done, placing them within their proper context, and critiquing them with an appropriate appreciation of the strengths and limitations inherent to military airpower. As such, he concludes that the apparent failings of the air forces in Market Garden, particular in the selection of landing zones, the extended timeline for the airlift, and the relatively limited provision of close air support, were not the result of carelessness or inter-service rivalries. Ritchie suggests that these failings were rather a product of the fact that the framework plans – developed independently by Montgomery and imposed upon the air forces with minimal consultation or opportunity for feedback or criticism – simply failed to account for the available resources and technical limitations of the air forces under the circumstances prevailing in September 1944. Thus, Ritchie argues that the air forces’ planners simply did the best they could in the face of severe pressures and limitations and that the flaws in those plans were not simple errors, but rather unavoidable consequences of those limitations – a fact that he argues that previous historians of Market Garden, who have generally focused almost exclusively upon the ground forces, have never fully appreciated.

Finally, the second myth falls apart as a natural consequence of the critiques Ritchie makes of the other two; given the unrealistic reliance that Montgomery’s plan for Market Garden placed upon absolute success to achieve its goals – a degree of success never before achieved by airborne operations - and his failure to realistically assess the ability of the air forces to actually execute the plans he made, it is clear that it can hardly be termed a masterwork of planning and that Market Garden’s flaws as a military operation started right at the very top. Thus, by examining Market Garden within the broader context of airborne operations in general and with a proper appreciation for the way that airpower works, Ritchie has produced a new history of the operation that will force any future scholars to carefully reconsider the reasons behind its failure.

Perhaps less groundbreaking, but also useful in light of the varied approaches and ideas it introduces to the discussion is *Operation Market Garden – The Campaign for the Low Countries, Autumn 1944: Seventy Years On*, a collected volume of essays written for the “Highway to the Reich” conference

held at Wolverhampton University in September 2014 in commemoration of the 70<sup>th</sup> anniversary of the campaign.<sup>24</sup> The central focus of this volume is an effort to challenge some of the myths and misunderstandings that have surrounded the operation by exploring several specific aspects of it in greater depth and detail. Among the more useful essays for the purposes of the current work are those of John Peaty, who examines the role that the dwindling supply of British infantry manpower in late 1944 had in impeding the combat performance of British units in the campaign, and of Russel A. Hart, who investigates the improvised formation and deployment of the 406<sup>th</sup> Infantry Division and the significant (but rarely appreciated) contribution it made to the German victory. Overall, the tightly focused and multi-varied nature of these essays allows the reader to develop an appreciation for various small but significant aspects of the campaign that may be missed in more broadly focused works.

Moving beyond works specifically written about Operation Market Garden and the Battle of Arnhem, this paper's effort to investigate how the British and German armies actually fought the battle, and the degree to which their differing approaches to combat shaped the operation's outcome, has benefited greatly from the numerous works written on the development and practice of combat doctrine in both armies.

Perhaps the most useful works for developing an understanding of the origins and nature of the German Army's tactical doctrine in the Second World War are Robert M. Citino's *The Path to Blitzkrieg: Doctrine and Training in the German Army, 1920-1939* and James S. Corum's *The Roots of Blitzkrieg: Hans von Seeckt and German Military Reform*.<sup>25</sup> These two works take similar approaches to similar subject matter, tracing the tactical doctrine that proved so effective for the German Army in World War Two back to reforms enacted in the early years following the German defeat in the First World War. Both authors argue that these reforms were spearheaded largely by Generaloberst Hans von Seeckt, the de facto Chief of Staff of the reformed German Army, the Reichswehr, from 1919-1926, who sought to rebuild the

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<sup>24</sup> John Buckley and Peter Preston-Hough (eds.), *Operation Market Garden – The Campaign for the Low Countries, Autumn 1944: Seventy Years On* (Solihull, UK: Helion & Company Limited, 2016).

<sup>25</sup> Robert M. Citino, *The Path to Blitzkrieg: Doctrine and Training in the German Army, 1920-1939* (Boulder, CO: Lynne Rienner Publishers, 1999); James S. Corum, *The Roots of Blitzkrieg: Hans von Seeckt and German Military Reform* (Lawrence, KS: University Press of Kansas, 1992).

army with a new doctrine that combined the best aspects of the old Imperial Army with the lessons learned in the Great War. They show that Seeckt combined the best aspects of traditional German doctrine, particularly its emphasis upon encouraging aggression, mobility, initiative and independent thinking among its officers and men, with the most significant developments to come out of the Great War, particular in the field of small-unit infantry “stormtroop” tactics and in concepts of motorized and mechanized warfare, to produce a modernized army that relied more upon mobility and the high quality of its forces than raw numbers and mass to achieve victories. Citino and Corum argue that it was this highly flexible and decentralized doctrine, coupled with the high standards of training introduced within the Reichswehr to ensure that doctrine could be successfully carried out, that provided the German Army of World War Two with a general qualitative advantage over the Allied forces at the tactical level, particularly in confused and rapidly changing situations such as those faced in Market Garden.

Despite their general similarities, Citino and Corum’s works differ usefully in several ways. Most notably, Citino focuses more upon in depth discussions of the various doctrinal manuals produced by the Reichswehr between 1919 and 1935, as well as on annual reports on the army’s maneuvers, and on the discussions that took place within the army’s journal literature in the period, to trace the development and promulgation of the new doctrine throughout the army and its effects upon its performance. Corum, on the other hand, focuses instead upon the details of the training programs established by the Reichswehr for officers, NCOs (non-commissioned officers), and enlisted men, showing how the concepts introduced in the new doctrine were effectively put into practice and instilled into the minds of soldiers at all levels. Each book thus provides useful details in the development of German doctrine and training that help to fill in some of the gaps in the other.

These two works are also usefully supplemented by another by Citino work, *The German Way of War: From the Thirty Years’ War to the Third Reich*, which seeks to trace the origins of the German doctrinal traditions mentioned above back to their points of origin in the wars of the 17<sup>th</sup> Century. Citino argues that the “German way of war,” focused on maneuver warfare and achieving quick, decisive battlefield victories through tactical superiority, developed out of the perennial strategic problems faced

by Germany (and the states of Brandenburg and Prussia that preceded it) - its relatively small size, limited resources, and, critically, the fact that it has generally been surrounded by potential adversaries. Citino shows that Germany – lacking the territory, manpower or resources to sacrifice ground or fight a war of attrition – instead sought to fight wars on its own terms by seizing the initiative and attacking before they could be attacked in turn, forcing their enemies onto the defensive and allowing German forces to dictate the flow of events to a large degree. Citino also argues that the disadvantages faced by the German states also encouraged both a long-standing focus upon high standards of training, as their armies would generally need a qualitative advantage to overcome enemies that outnumbered them, and a tradition of subordinate commanders being permitted to exercise a considerable degree of independence in carrying out the orders of their superiors, as hard pressed German forces could not afford to waste fleeting opportunities encountered on the battlefield by waiting for orders to exploit them to come from above.

Overall, these last three works all serve to demonstrate not only the nature and origins of the doctrine and tactical proficiency that proved so useful to the German Army in World War Two as a whole, and during the Market Garden fighting in particular, but also the fact that they were the product not simply of short term changes to manuals of instruction and training methods, but of long-standing traditions instilled into the very heart of German military culture for decades in terms of specific doctrine, and centuries in terms of the broader principles. As such, it is hardly surprising that their opponents had so much difficulty in adapting to and overcoming these German advantages in the short time they had available, and that the process was far from complete in the fall of 1944, even after four years of war.

Turning to the British Army, several works have explored the difficulties the British Army of World War Two faced in developing effective combat doctrine and tactics, particularly with regards to the infantry combat that predominated during Market-Garden. Jeremy A. Krang's *The British Army and the People's War 1939-1945*, David French's *Raising Churchill's Army: The British Army and the War Against Germany, 1919-1945* and Timothy Harrison Place's *Military Training in the British Army 1940-1944: From Dunkirk to D-Day* all make the observation that the combat performance of the "front-line" arms of the British Army in the Second World War – that is, the infantry and armoured forces – was, in

general, mediocre.<sup>26</sup> They note that the tactics used by British infantry and tankers were generally outdated and overly simplistic, that the quality of training among both their officers and enlisted men was usually fairly low, and that British forces generally relied heavily upon superior numbers and weight of materiel, particularly an overwhelming amount of artillery and air support, to defeat their German opponents, and often still suffered a disproportionate scale of losses in doing so.

Though they broadly agree on the general flaws of the British Army, these three authors differ to some degree in what they see as the reasons for this tactical weakness. Krang sees it largely as the result of a strong tradition of conservatism within the British Army as a social institution, one in which it was not elderly and hidebound senior generals that resisted change and innovation, as is often charged, but instead a sizeable proportion of the long-serving middle-ranking officers and NCOs throughout the field forces who all too often steadfastly resisted efforts by the War Office and other central command organs to update and revise the tactics and methods with which they were comfortably familiar, even when their inadequacy had been manifestly demonstrated by failures in the field. Krang argues that this resistance was enabled largely by the Army's Regimental System, which made standards and methods of training an entirely "sovereign" responsibility of battalion and (to a lesser extent) divisional commanders; this ensured that what efforts the army made to develop its tactics and training could never become standardized, as commanding officers could adopt or ignore doctrinal directives as they saw fit. This "drag" upon tactical development ensured that, despite the extensive information accrued from the experiences of the first four years of the war, and the lengthy training period available for most British units before the invasion of Europe, British combat doctrine and training standards still remained well behind those of the Germans in late 1944.

French's book, however, disagrees with Krang's conclusions, arguing that the British Army of the interwar period was not as conservative as is often thought and that it did make a considerable effort to

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<sup>26</sup> Jeremy A. Krang, *The British Army and the People's War 1939-1945* (Manchester: Manchester University Press, 2000); David French, *Raising Churchill's Army: The British Army and the War Against Germany 1919-1945* (Oxford: Oxford University Press, 2000); Timothy Harrison Place, *Military Training in the British Army 1940-1944: From Dunkirk to D-Day* (London: Frank Cass, 2000).

modernize itself in line with the lessons of the First World War, developing a new doctrine through the 1920s that embraced modern concepts of combined arms warfare and mechanization. French argues, however, that the army was largely unsuccessful in actually putting this doctrine into practice, being hampered by its retention of a highly rigid centrally controlled command system and a tendency to excessive caution that emphasized preservation of strength and morale over the exploitation of opportunities, both of which were informed by a general disregard among the upper ranks for the intelligence and resilience of the average enlisted man. French argues these flaws ensured that the British army remained far too inflexible and slow in its reactions on the battlefield to make the best use of the potential of its doctrine. French does agree with Krang on the point of training, however, arguing that the lack of centralized enforcement of standards for training, and a general failure to pay sufficient attention to it, ensured that what advances were made in doctrine and tactics were only intermittently - and often incorrectly or incompletely - promulgated amongst the troops.

French, however, does not take an entirely negative view of the British Army's fighting efforts, arguing that they did eventually learn how to play to their strengths, particularly in the effective use of massed artillery firepower, and, along with their allies, eventually won the war against the Germans in spite of their advantages. This conclusion that the British Army was able to achieve success as long as it could play to its strengths, however, leads the reader to consider the possible consequences that would likely result when the army exited its "comfort zone" of superior firepower – as it did in Market Garden.

Timothy Place's book follows an approach largely similar to that of French, arguing that the British Army's greatest failing was its inability to effectively and consistently convey appropriate doctrine to its troops via training. To illustrate this, Place examines the cases of three different divisions to show that the tactical proficiency of units was often just the "luck of the draw," with successful units generally benefitting from having been fortuitously assigned commanding officers who paid sufficient attention to training efforts, actually took the time to learn the doctrine, and had sufficient experience and/or good judgement to determine those methods and standards that were best suited to the demands of modern combat. The fact that one of the divisions he studies, and whose training standards he specifically

criticizes – the Guards Armoured Division – was, as mentioned above, prominent in Market Garden makes Place’s work particularly useful to this study, providing some explanation for the difficulties the unit experienced in the battle. Overall, these three works help the reader to understand the very serious shortcomings that British forces were operating with, even in late 1944, and to appreciate the fact that what successes they did achieve were based upon fighting according to very specific methods that minimized their flaws – methods that, for the most part, could not be effectively used during Market Garden, leaving the British Army at a notable disadvantage.

Stephen A. Hart’s *Montgomery and “Colossal Cracks”: The 21<sup>st</sup> Army Group in Northwest Europe*, serves as a highly useful counterpoint to the more critical views of the World War Two British Army expressed in the preceding works.<sup>27</sup> Hart argues that the slow, cautious, firepower centric approach to combat taken by the British Army in Northwest Europe in 1944 was far more effective than many of its critics have suggested. Hart argues that Montgomery, and other like-minded commanders, deliberately chose to adopt this doctrine because of the specific circumstances faced by the British Army and nation in the latter half of World War Two. With the British Army finding itself well behind its German opponents in the kind of training and leadership needed to effectively employ their brand of fast moving mobile armoured tactics, and with the British government facing a looming shortage of manpower and considerable concerns about the morale and will of their people to carry on the fight, Montgomery’s battle methodology, first deployed in the North African desert at El Alamein and honed to a high level of effectiveness since, played to British strengths and minimized their weaknesses. By relying upon overwhelming firepower delivered by artillery and tactical airpower and by constructing elaborate and cautious plans with relatively limited objectives, Montgomery was able to both preserve his country’s precious manpower and potentially fragile morale and to avoid “playing the Germans’ game” by trying to engage in the type of fast-moving, free-form warfare for which his own forces were not adequately prepared.

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<sup>27</sup> Stephen Ashley Hart, *Montgomery and “Colossal Cracks”: The 21<sup>st</sup> Army Group in Northwest Europe, 1944-45* (Westport, CT: Praeger Publishers, 2000).

Hart further argues that, far from hampering Allied efforts in Normandy as some have charged, Montgomery's "Colossal Cracks" doctrine was in fact chiefly responsible for the degree of success that the Allies achieved there, with the firepower allowing the Allies to steadily wear down the Germans, in spite of their often superior tactics and equipment, while the caution and careful planning greatly reduced the opportunities the Germans might have had to inflict a serious reverse upon them. Hart thus demonstrates that the British Army had established an effective and successful method of waging war by the fall of 1944, which leads a student of Market Garden to consider the degree to which that operation's failure came due to divergences from the model that had just proven so effective in Normandy.

Finally, although its specific subject matter technically falls outside of the period discussed in this paper, Martin Samuels' *Command or Control? Command, Training and Tactics in the British and German Armies, 1888-1918* provides a very useful comparative study of the differences in doctrine and combat philosophies of the German and British armies – one that remains largely applicable to the Second World War as well.<sup>28</sup> Samuels argues that the very different responses developed by the militaries of each nation to the challenges of modern warfare faced in the late 19<sup>th</sup> and early 20<sup>th</sup> centuries were the result of deep differences in their cultural views on the broader nature of warfare. Samuels argues that the German leadership, in the tradition of Clausewitz, saw combat as an inherently and immutably chaotic and unpredictable thing, in which it was impossible to make entirely reliable predictions or rigid plans for how events would develop; this in turn led to them believing that success in combat could only be achieved by learning to operate effectively within these conditions of chaos. Thus, the Germans adopted a system of decentralized command, developing a high level of skill, independence and initiative as widely as possible among their officers and men to ensure their ability to react to changing situations and exploit fleeting local opportunities without the direction from above that was so subject to delays or interruptions.

In contrast, Samuels argues that British leadership believed that while combat was naturally chaotic, that chaos could be effectively mitigated and made subject to order, given a sufficient degree of

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<sup>28</sup> Martin Samuels, *Command or Control? Command, Training and Tactics in the British and German Armies, 1888-1918* (London: Frank Cass, 1995).

strict central control by commanders and rigid discipline and obedience to orders among their troops; effectively, they chose to implement a command system to resist chaos rather than accepting it, as the Germans did. Samuels argues that all the differences between the doctrine and tactics of the two nations effectively trace back to these differing views on the nature of combat and that, in the end, the more flexible German system proved much better suited to actually coping with the realities of modern warfare than did that of the British, which was never really able to establish the degree of control it aspired to. Samuels also argues that this deeper philosophical difference between the two armies was a major reason why the British were unable to successfully adopt German methods, despite several efforts – the German way of thinking that was so central to the effectiveness of their decentralized command system was simply too alien to the British Army's cultural mindset to be rapidly adopted. In light of the chaotic conditions that generally prevailed on both sides throughout the events of operation Market Garden, Samuels' arguments on how the way that each military perceived and coped with chaos in combat influenced the way they fought are highly instructive.

## CHAPTER 2: THE ORIGINS AND NATURE OF GERMAN TACTICAL AND COMMAND

### DOCTRINE

The nature of German combat doctrine – the principles and concepts that informed the tactics, training and organization of their fighting forces - was central to the success of Army Group B against Operation Market Garden in September 1944, allowing it to react quickly and effectively to the surprise attack, successfully disrupt the Allied battle plan, and contain a potentially decisive Allied breakthrough. This doctrine had officially been developed in the wake of the First World War, but drew upon a long tradition of German warfare and particularly its key principles of independent and aggressive battlefield leadership and tactical proficiency. Such a doctrine ensured that the Wehrmacht was almost ideally suited to the confused, chaotic, and rapidly changing nature of a combined airborne-mechanized operation such as Market Garden, allowing it to quickly retake the initiative from the Allied forces and seize the upper hand in the ensuing fighting.

One of the most important and long standing elements of German military doctrine was a general perception of warfare as an unavoidably chaotic and unpredictable activity.<sup>29</sup> This perception was perhaps first articulated by Carl von Clausewitz in his famous work *Vom Kriege* (On War), in his description of the concept of “friction”: the wide variety of universally present and often unavoidable factors, both major and minor, that could complicate or disrupt the implementation of military plans under real world conditions, ensuring that those plans could virtually never be executed exactly as intended.<sup>30</sup> The concept, however, was already a prominent feature in German military thought well before Clausewitz penned his work, dating back to the earliest days of the modern Prussian state. At its core, this philosophy of combat postulated the idea that, as a violent, emotionally charged activity waged between competing human

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<sup>29</sup> Martin Samuels, *Command or Control? Command, Training and Tactics in the British and German Armies, 1888-1918* (London: Frank Cass, 1995), pp. 2, 283; Ola Kjoerstad, “German Officer Education in the Interwar Years: *Frei im Geist, fest im Charakter*,” (MA Thesis, University of Glasgow, Scotland, 2010), p 34.

<sup>30</sup> Carl von Clausewitz, *On War* (New York: Penguin Books, 1968), pp. 164-7.

minds, war was simply too complex to be fully understood, predicted, or governed according to set rational principles – that the conduct of war was far more of an art than it was a science.<sup>31</sup>

This philosophy of warfare in turn shaped the way that German doctrine viewed leadership and command. Given that they saw battle as an extremely chaotic and unpredictable affair, the prevailing view among most prominent German military leaders through history, such as the “Great Elector” Friedrich Wilhelm of Brandenburg, Frederick the Great, and Helmut von Moltke the Elder, as well as their military establishments, was that combat doctrine could not simply be a set of prescriptive rules or formulas for what were the best actions for a commander to take in any given situation in battle, as there were simply too many possible variations and complicating factors to accurately predict in advance. Instead, German doctrine saw the key element of effective leadership as being the ability to quickly and accurately assess a situation and then to draw upon both one’s knowledge and creativity in figuring out and applying a solution tailored to the specific circumstances and conditions faced. German doctrine has thus generally been less a set of firm “commandments” than a set of loose principles to guide a commander in judging the situations they faced and making appropriate decisions.<sup>32</sup> Moreover, because friction would naturally impede the ability of a commander of any sizeable force to both obtain an accurate assessment of the situation on any given portion of the battlefield, and to effectively communicate his orders to the various sub-units under his command, German doctrine placed a high premium on the ability of subordinate commanders to exercise independent initiative and make their own assessments and decisions according to whatever local threats or opportunities presented themselves, without firm direction or specific orders from the centre.<sup>33</sup>

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<sup>31</sup> Bruce Condell and David T. Zabecki, (eds.) *On the German Art of War: Truppenführung: German Army Manual for Unit Command in World War II* (Mechanicsburg, PA: Stackpole Books, 2009), p. 17; Robert M. Citino, *The German Way of War: From the Thirty Years’ War to the Third Reich* (Lawrence, KS: University of Kansas Press, 2005), pp. 61, 144-45; T.N. Dupuy, *Understanding War: History and Theory of Combat* (New York: Paragon House, 1987), p. 23.

<sup>32</sup> Condell and Zabecki, (eds.) *On the German Art of War: Truppenführung*, pp. 9, 17; James S. Corum, *The Roots of Blitzkrieg: Hans von Seeckt and German Military Reform* (Lawrence, KS: University Press of Kansas, 1992), p. xv; Matthias Strohn, *The German Army and the Defence of the Reich: Military Doctrine and the Conduct of the Defensive Battle 1918-1939* (Cambridge: Cambridge University Press, 2011), pp. 14, 114; Williamson Murray, *German Military Effectiveness* (Baltimore: The Nautical & Aviation Publishing Company of America, 1992), p. 206.

<sup>33</sup> Kjoerstad, “German Officer Education in the Interwar Years,” p. 38; Samuels, *Command or Control?*, pp. 5, 13-15.

As such, one of the defining principles of modern German military doctrine is a concept that has generally become known as “Auftragstaktik,” which translates loosely as “mission tactics.” The term was first explicitly expressed by Moltke the Elder in the era of the German Wars of Unification but, like Clausewitz’ “friction,” the basic concept was traceable back through the reigns of Frederick the Great and the Great Elector.<sup>34</sup> The essence of Auftragstaktik was the idea that a senior commander should not issue detailed orders telling their subordinates precisely what to do and when to do it, but rather should only outline the general tasks or “missions” they wanted accomplished, while leaving any specific details of conducting the battle for those subordinates to figure out and decide for themselves according to the specific situations they encountered.<sup>35</sup> It is important to note that this did not grant subordinate commanders total freedom to do as they wished; they were still expected to conform to the general intent of a superior’s overall plans and were held responsible for any consequences of their actions. However, within that broad framework German commanders were generally granted a wide degree of freedom - and responsibility - to exercise their own initiative, conduct their own battles, interpret and alter orders as they saw fit, and even to disobey orders that they believed were no longer appropriate to a situation.<sup>36</sup> In its earliest form through the 17<sup>th</sup>, 18<sup>th</sup>, and 19<sup>th</sup> Centuries, known as “Weisenführung” or “leadership by directive,” Auftragstaktik only extended this freedom of action down to the most senior subordinates of an army commander, such as corps or division commanders, but, as will be discussed more later, the 20<sup>th</sup> Century saw the principle extended down to even the smallest units of an army.<sup>37</sup>

Coupled to this emphasis on initiative within German doctrine was an equally strong emphasis upon rapid and aggressive offensive action. This offensive orientation was largely the result of the general strategic situation that has confronted Germany and its predecessor states, that of being a relatively small

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<sup>34</sup> Citino, *The German Way of War*, pp. 32, 89, 152; Samuels, *Command or Control?*, p. 11; Corum, *The Roots of Blitzkrieg*, p. 5.

<sup>35</sup> Citino, *The German Way of War*, p. 152; Corum, *The Roots of Blitzkrieg*, p. 5; Murray, *German Military Effectiveness*, p. 203.

<sup>36</sup> Condell and Zabecki, (eds.) *On the German Art of War: Truppenführung*, p. 18; Kjoerstad, “German Officer Education in the Interwar Years,” pp. 52-3.

<sup>37</sup> Condell and Zabecki, (eds.) *On the German Art of War: Truppenführung*, p. 4; Samuels, *Command or Control?*, p. 15; Murray, *German Military Effectiveness*, p. 203.

and resource poor country surrounded by potential enemies that could muster superior human and material resources. This situation made defensive conflicts and prolonged wars of attrition impractical, as the German states generally lacked both the geographic depth and the reserves of fighting men and materiel that such strategies required.<sup>38</sup> Since the 17<sup>th</sup> Century, German military leaders had sought to resolve this problem by seeking to wage short, decisive wars. They sought to seize and hold the strategic and operational initiative in any conflict by taking to the offensive as swiftly and aggressively as possible, throwing their opponents onto the defensive and allowing them to concentrate their own more limited strength at a time and place of their own choosing to defeat the enemy's forces as swiftly as possible, ideally in a single, decisive battle.<sup>39</sup> As such, German doctrine heavily emphasized the importance of boldness and aggression to effective military leadership, asserting that any commander should seek to take the offensive whenever and wherever possible in order to seize the initiative and force their opponent to react, rather than allowing that opponent to carry out their own plans. According to this way of thinking, taking action was in and of itself a virtue, with even incorrect actions being seen as preferable to idly waiting for orders or more information in an uncertain situation, as such inaction would simply allow the enemy greater freedom to act themselves.<sup>40</sup> This overall concept of bold, aggressive, and independent leadership in combat has been a defining feature of German warfare – what Citino has termed “the German Way of War” - from the mid-17<sup>th</sup> Century onwards, with numerous famous victories such as those of Frederick the Great in the Seven Years' War, or those of Moltke in the Wars of Unification, relying heavily upon aggressive independent action by subordinate commanders operating relatively loosely within the framework of an overall plan.<sup>41</sup>

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<sup>38</sup> Citino, *The German Way of War*, pp. xiii-xiv; Murray, *German Military Effectiveness*, pp. 2-3.

<sup>39</sup> Samuels, *Command or Control?*, p. 8; Strohn, *The German Army and the Defence of the Reich*, pp. 25-28.

<sup>40</sup> Murray, *German Military Effectiveness*, p. 202; Condell and Zabecki, (eds.) *On the German Art of War: Truppenführung*, p. 19; Stephen Bull, *World War II Infantry Tactics: Squad and Platoon* (Oxford: Osprey Publishing, 2004), p. 51; Jürgen Förster, “The Dynamics of Volksgemeinschaft: The Effectiveness of the German Military Establishment in the Second World War,” in *Military Effectiveness, Volume 3 : The Second World War*, (eds.) Allan R. Millett and Williamson Murray (New York: Cambridge University Press, 2010), p. 206.

<sup>41</sup> Citino, *The German Way of War*, pp. 89, 152, 159, 172-73.

However, a major turning point for this German doctrine came in the First World War, particularly with regards to Auftragstaktik. In the decades prior to the First World War, the concept of independent leadership had been, to a degree, deemphasized within the German Army, as the then Chief of the General Staff, Count Alfred von Schlieffen, preferred a strategy of rigidly controlled and scheduled mobilization and maneuver to take advantage of the sheer mass of Germany's large conscript army.<sup>42</sup> This rigid, mass-based strategy failed utterly in the opening years of World War One, however, with Germany's ponderous opening offensive grinding to a halt in the face of modern firepower on the Marne, leaving Germany facing the very prolonged attritional war it had long sought to avoid. Unsurprisingly, many among the German military establishment sought a solution to the growing trench deadlock in the successful practices of the past. Given that Germany still had little hope of winning the defensive war of attrition they had found themselves in, the German military remained committed to seeking a return to a decisive offensive war. It was also realized, however, that the rigid, mass-based tactics of the Schlieffen era were entirely unsuited to the conditions of modern war and that any offensive would require entirely different methods to succeed.<sup>43</sup>

While the forces of the Entente sought a solution to the stalemate mainly in technology – such as the use of tanks and increasingly elaborate artillery programs – the Germans sought their answer in a reform of their combat tactics, largely in the application of the principles of Auftragstaktik to an unprecedented degree. One of the chief problems encountered in wielding military forces in the First World War was that of command and control; the level of dispersion necessary for forces to have any chance of surviving in the face of modern firepower completely overwhelmed traditional methods of central command that relied on vocal, visual, or cable-based communication. Once out of their trenches,

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<sup>42</sup> Condell and Zabecki, (eds.) *On the German Art of War: Truppenführung*, p. 2; Kjoerstad, "German Officer Education in the Interwar Years," p. 22; Samuels, *Command or Control?*, p. 31; Strohn, *The German Army and the Defence of the Reich*, pp. 26-7.

<sup>43</sup> Citino, *The German Way of War*, p. 236; Kjoerstad, "German Officer Education in the Interwar Years," p. 22.

any sizeable attacking force quickly became uncontrollable by any central commander, leaving the attack to dissolve into chaos in the face of enemy fire and unexpected developments.<sup>44</sup>

In light of their long-standing views on the ubiquity and inevitability of chaos on the battlefield, the German military sought to solve this problem not by improving central control, but by devolving a large degree of command responsibility down to the smallest units of the army: companies, platoons, and even squads. The German military thus developed what James Corum called “the greatest German tactical achievement of the war”: the famous “stormtroop tactics.” At the heart of this concept – initially developed through local experimentation by individual units at the front – was the restructuring of the above-mentioned small units into nearly fully independent units capable of employing both their own firepower and tactical maneuver on the battlefield. These units, supplied with their own organic firepower in the form of machine guns, trench mortars, and light infantry guns, were trained to operate and maneuver independently and aggressively, matching their tactics to the specific resistance and terrain encountered to maintain offensive momentum in this face of battlefield confusion.<sup>45</sup> The result of this was the expansion of the principles of *Auftragstaktik* throughout the entire army, as stormtroop tactics naturally required individual small-unit leaders and even individual soldiers to take an increasing degree of responsibility for their conduct on the battlefield, as they would have to be able to assess their own situations and make appropriate decisions. Thus, after a prolonged period of retraining in 1916 and 1917, the German Army deployed its stormtroop tactics with considerable tactical success in the last year of the war, particular in their successful counteroffensive at Cambrai in November 1917 and in the Spring Offensives of 1918. Though the Germans failed to achieve the decisive victory they sought, the effectiveness of their stormtroop tactics in battle was widely acknowledged.

In the wake of its defeat in the First World War and the signing of the Treaty of Versailles, the Imperial German Army was disbanded in 1919, with a new army, the Reichswehr, being formed to replace it. This new army, however, maintained most of the traditional doctrinal principles of the old, and

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<sup>44</sup> Samuels, *Command or Control?*, p. 61; Kjoerstad, “German Officer Education in the Interwar Years,” pp. 22, 35.

<sup>45</sup> Corum, *The Roots of Blitzkrieg*, pp. 8-9; Trevor N. Dupuy, *The Evolution of Weapons and Warfare* (New York: Bobbs-Merrill, 1980), p. 225; Samuels, *Command or Control?*, pp. 88-93.

also learned well from the experience of the First World War. As head of the Truppenamt, or “Troops Office,” the de facto successor to the disbanded General Staff, the leading figure in the formation of the Reichswehr was Generaloberst Hans von Seeckt. Seeckt was a highly successful staff officer who is now widely seen as the man perhaps most responsible for the impressive performance of the German Wehrmacht in the early years of World War II.<sup>46</sup> Almost immediately after the war, Seeckt commissioned an exhaustive investigation of the experiences of the army in the First World War and the effectiveness of German doctrine, seeking to ascertain both what went wrong and what had proven successful.<sup>47</sup> The results of this comprehensive “self-evaluation” largely confirmed Seeckt’s existing ideas on the basic viability of traditional German doctrine, with its focus upon decisive offensive action, flexibility, and initiative, suggesting that the German defeat was due mainly to a failure to properly apply those principles.<sup>48</sup> Seeckt had spent the bulk of his career on the Eastern Front, where he was prominent in the planning of several successful offensives, such as the battle of Gorlice-Tarnow, and the invasions of Serbia and Rumania. He believed that the stalemate on the Western Front had been primarily the result of the fact that the armies there were simply too big and unwieldy to effectively maneuver in the relatively limited available space, forcing them to rely on simple brute force and attrition. Seeckt thus believed that traditional German mobile offensive warfare, or “Bewegungskrieg,” was still entirely possible for a smaller, but more maneuverable and better trained army.

The primary result of Seeckt’s efforts was a new core doctrinal manual for the Reichswehr, *Führung und Gefecht der verbundenen Waffen (Combat and Command of the Combined Arms)* or “FuG,” published in two parts in September 1921 and June 1923. This new doctrine effectively updated traditional German doctrine for the demands of modern warfare, incorporating the new tactical developments of the First World War.<sup>49</sup> *FuG* remained the primary source of combat doctrine for the Reichswehr throughout most of its short existence, being replaced in 1933 by *Heeresdienstvorschrift 300*:

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<sup>46</sup> Robert M. Citino, *The Path to Blitzkrieg: Doctrine and Training in the German Army, 1920-1939* (Boulder, CO: Lynne Rienner Publishers, 1999), p. 145; Corum, *The Roots of Blitzkrieg*, pp. xii-xiii, 25, 199.

<sup>47</sup> Corum, *The Roots of Blitzkrieg*, pp. 37-9; Strohn, *The German Army and the Defence of the Reich*, pp. 107-8.

<sup>48</sup> Corum, *The Roots of Blitzkrieg*, pp. 2-3.

<sup>49</sup> Citino, *The German Way of War*, p. 240; Corum, *The Roots of Blitzkrieg*, p. 40; Citino, *The Path to Blitzkrieg*, p. 14.

*Truppenführung* (Army Service Regulation 300: Troop Leading or Unit Command). *Truppenführung*, however, was largely just a minor update of *FuG*, reproducing virtually all of its main principles and even reprinting some sections almost verbatim; it would remain the central doctrinal manual of the German Army through to the end of the Second World War.<sup>50</sup>

*Truppenführung* heavily emphasized the principles of independent and aggressive leadership outlined above; though the term “Auftragstaktik” is never actually used in the manual, the concept is pervasive throughout the work.<sup>51</sup> Among the key concepts expressed in *Truppenführung* was the idea that strict centralized control was entirely unsuitable to the conditions of modern mobile warfare, and that such conditions instead demanded “soldiers who can think and act independently, who can make calculated, decisive, and daring use of every situation, and who understand that victory depends on each individual” and “leaders capable of judgment, with clear vision and foresight, and the ability to make independent and decisive decisions and carry them out unwaveringly and positively.”<sup>52</sup> It thus concluded that “The commander must allow his subordinates freedom of action, so long as it does not adversely affect his overall intent,” charging that units should be both willing and able to act without orders from above to exploit whatever fleeting opportunities might present themselves at the front, and to modify or discard the specifics of any orders as the situation demanded, as long as they acted in accordance with their commander’s overall intentions.<sup>53</sup>

*Truppenführung* also emphasized the need for commanders to opt for quick decisions and bold, positive action whenever possible, stating that “The first criterion in war remains decisive action. Everyone, from the highest commander down to the youngest soldier, must constantly be aware that inaction and neglect incriminate him more severely than any error in the choice of means.”<sup>54</sup> It did qualify this however, stating that “great successes requires boldness and daring, but good judgment must take

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<sup>50</sup> Condell and Zabecki, (eds.) *On the German Art of War: Truppenführung*, pp. 3, 7, 10; Corum, *The Roots of Blitzkrieg*, pp. 49, 199-200.

<sup>51</sup> Condell and Zabecki, (eds.) *On the German Art of War: Truppenführung*, p. 5.

<sup>52</sup> Condell and Zabecki, (eds.) *On the German Art of War: Truppenführung*, pp. 17-18.

<sup>53</sup> Condell and Zabecki, (eds.) *On the German Art of War: Truppenführung*, p. 37.

<sup>54</sup> Condell and Zabecki, (eds.) *On the German Art of War: Truppenführung*, p. 19.

precedence,” emphasizing that, while prompt and aggressive action was generally desirable, commanders still needed to carefully consider their actions, and should not attack carelessly or recklessly in an unsuitable situation. Therefore, *Truppenführung* ideally sought to instill aggressive leadership, but not a “berserker” mentality, and while offensive action was emphasized, it was not seen as the sole solution to any given problem.

Expanding upon these concepts, *Truppenführung* also devoted considerable attention to the concept of “meeting engagements,” where two opposing forces met unexpectedly on the march and thus had to engage with minimal advance knowledge or preparation. *Truppenführung* emphasized that such engagements were usually won by the side that was able to assess the situation, make decisions, and act more quickly than the other, which meant that the ability of subordinate commanders in the advance guard to take the initiative and attack while the other side was still confused was critical.<sup>55</sup> It is worth noting that this type of engagement was also heavily emphasized in the Reichswehr’s annual exercises, being seen as the ideal way to train officers and troops on how to improvise rapidly in combat.<sup>56</sup>

Moreover, *Truppenführung* also extended its ideas on initiative and aggressive action to defensive warfare. In this, *Truppenführung* drew upon the concept of “elastic defence” developed in World War 1, in which defence was based not around repulsing the enemy through raw firepower from a single, rigidly-held front line, but rather around local withdrawals and counterattacks from within the depth of a position against any enemy penetrations of the line.<sup>57</sup> Though *Truppenführung* still maintained that firepower was the keystone of any defence, it emphasized that a commander should endeavor to wield this firepower as actively as possible, rather than simply passively awaiting an enemy’s attack; it called upon commanders to actively seek out and seize the best possible terrain to maximize the effect of their defensive firepower,

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<sup>55</sup> Condell and Zabecki, (eds.) *On the German Art of War: Truppenführung*, pp. 105-7.

<sup>56</sup> Citino, *The German Way of War*, p. 242; Kjoerstad, “German Officer Education in the Interwar Years,” p. 71.

<sup>57</sup> Samuels, *Command or Control?*, pp. 159, 167, 196; Strohn, *The German Army and the Defence of the Reich*, pp. 49-58; Murray, *German Military Effectiveness*, p. 20.

to rapidly counterattack any penetration before an enemy could consolidate their position, and to follow up any defeated enemy attack with their own offensive action.<sup>58</sup>

The doctrine expressed in *Truppenführung*, with its calls for quick decision making and action at all levels of command, naturally placed extremely high demands upon the abilities of the officers and men of the German Army; given the considerable freedom it gave soldiers to exercise their own judgment in making critical decisions, the proper development of that judgment would be vital in ensuring the doctrine could be effectively put into action. As such, a key factor in the German doctrinal “renaissance” of the interwar period was an extensive and intensive program of training and exercises, introduced by Seeckt alongside *FuG* and carried on by his successors right up through the Second World War. Historian James Corum, for example, has argued that the German Army’s level of training was the most significant advantage it had over its opponents in the early years of World War II.<sup>59</sup>

Seeckt’s training programs were hardly introducing an entirely new concept to the German military; the idea that the quality of officers and troops was often much more important to combat success than simple numbers had a longstanding basis in German military thought, dating back at least to the days of Frederick the Great, whose musketeers were famously trained to a unmatched level of proficiency in their drill and were able to fire their muskets significantly faster than any opponent.<sup>60</sup> Seeckt, in turn, strongly believed that the quality of an army’s training was far more important to its performance than simple numbers (a factor made even more important in light of the size limitations imposed on the Reichswehr by Versailles), and further believed that intensive training would be necessary both to promulgate the *FuG* doctrine throughout the army and to ensure that its officers and men were actually capable of acting as the doctrine directed.<sup>61</sup>

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<sup>58</sup> Condell and Zabecki, (eds.) *On the German Art of War: Truppenführung*, pp. 119, 128, 131.

<sup>59</sup> Corum, *The Roots of Blitzkrieg*, pp. xvi, 205.

<sup>60</sup> Corum, *The Roots of Blitzkrieg*, p. 10; Philip Haythornthwaite, *Frederick the Great’s Army (2) Infantry* (Oxford: Osprey Publishing, 1991), p. 11; Murray, *German Military Effectiveness*, pp. 207-8.

<sup>61</sup> Strohn, *The German Army and the Defence of the Reich*, pp. 95-6; Corum, *The Roots of Blitzkrieg*, p. 74; Samuels, *Command or Control?*, p. 284; Antulio J. Echeverria, “Auftragstatik in its Proper Perspective,” *Military Review* 66. No. 10 (1986), pp. 52-53; Citino, *The Path to Blitzkrieg*, pp. 17-18; Kjoerstad, “German Officer Education in the Interwar Years,” p.38.

As such, Seeckt instituted a training system that was geared to preparing the army as effectively as possible for the conditions they would face on the battlefield. The primary emphasis of this training was upon developing the skills necessary for effective leadership and decision making, in officers, non-commissioned officers (NCOs) and even enlisted men. At the most basic level, the German Army simply put more time and effort into training its soldiers, and particularly its officers and NCOs, than most other armies. In peacetime a German officer candidate could expect to spend four years in intensive training before they were commissioned – as long as a modern doctoral program – and though this period was reduced to a still lengthy two years in 1937, in the face of a massive expansion of the army and the looming threat of war, the standards expected in the final examinations remained largely the same.<sup>62</sup> Similarly, German NCOs were selected by performance and examinations on their tactical knowledge, rather than simple seniority as in the British and US armies, and candidates often attended specialized NCO schools to hone their command abilities. This system of selection and training ensured that German NCOs represented a well-trained corps of junior leaders, rather than just “assistants” to officers, and often performed more important command roles in the field than their counterparts in other armies; it was, for example, quite common for senior NCOs to be assigned to command platoons in the German forces.<sup>63</sup>

Both the Reichswehr and Wehrmacht also made extensive use of realistic exercises, both using maps and sand-tables and, as frequently as possible, in the field.<sup>64</sup> One of the most important characteristics of these exercises was that commanders and men were expected not simply to carry out a pre-formulated plan (as was generally the case for the exercises of most other armies), but to formulate and execute their own plans based on the specific situations with which they were faced, and to confront and deal with unexpected changes to those situations.<sup>65</sup> Junior officers, NCOs, and even private soldiers would often be able - and even encouraged – to contribute to or critique the formulation of those plans, or even to take turns at playing a command role within their unit, ensuring that virtually every German

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<sup>62</sup> Corum, *The Roots of Blitzkrieg*, pp. 78-81, 201.

<sup>63</sup> Corum, *The Roots of Blitzkrieg*, pp. 77, 94, 201.

<sup>64</sup> Citino, *The Path to Blitzkrieg*, pp. 105-6; Corum, *The Roots of Blitzkrieg*, pp. 73-74.

<sup>65</sup> Bull, *World War II Infantry Tactics: Squad and Platoon*, p. 13; Murray, *German Military Effectiveness*, pp. 210-11.

soldier had at least a basic grasp of the principles of command and tactics.<sup>66</sup> This practical experience in leadership ensured not only that the officers and NCOs of the German army were given considerable opportunities and resources to develop their sense of tactical judgement and decision making abilities, but also that the army almost always had a sizeable pool of men willing and able to take the initiative and to assume a higher level of command responsibility when necessary.<sup>67</sup>

Finally, and perhaps most importantly, training in the German army focused very heavily upon teaching the basics of minor tactics for employment at the “sharp end” of combat - up to the level of battalion command; by comparison, British and US officer academies generally focused on matters of administration and higher strategy.<sup>68</sup> Given that the German Army saw infantry combat as the most basic and central element of battle, every soldier of every branch of the army was trained in infantry tactics before proceeding to any specialist training and the first year of every officer’s training was spent learning how to lead and maneuver all infantry units from sections up to battalions.<sup>69</sup> This meant that German junior officers and men – even those that were technically not front line combatants – had a much better grounding in the most basic tasks and demands of front line combat tactics and leadership than their Allied counterparts.

This high standard of training, standardized across the German Army, ensured not only that the members of the Wehrmacht generally possessed the high level of knowledge and skill that the doctrine of *FuG* and *Truppenführung* required, but also that they shared common concepts and ways of thinking about combat, a factor that was crucial to the effective functioning of *Auftragstaktik*. Given the considerable freedom that the various sub-units of the German Army had to operate independently, this common standard of training ensured that they would all generally make decisions and act within a

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<sup>66</sup> Corum, *The Roots of Blitzkrieg*, pp. 72-73; Echevarria, “Auftragstaktik in its Proper Perspective,” p. 51.

<sup>67</sup> David French, *Raising Churchill’s Army: The British Army and the War Against Germany 1919-1945* (Oxford: Oxford University Press, 2000), p. 59.

<sup>68</sup> Citino, *The Path to Blitzkrieg*, pp. 82, 96.

<sup>69</sup> Bull, *World War II Infantry Tactics: Squad and Platoon*, p. 10; Corum, *The Roots of Blitzkrieg*, p. 71; French, *Raising Churchill’s Army*, p. 58.

common framework, even without specific direction from above, ensuring that their various independent actions maintained a unity of purpose.<sup>70</sup>

Thus, the German Army entered the Second World War with both doctrine and training that produced a high degree of tactical proficiency, initiative, and aggression throughout its ranks, qualities which were reflected by the many notable successes achieved by lower-level commanders acting without, or even contrary to, orders, when an opportunity was perceived. Perhaps best known are the examples of Panzer commanders Heinz Guderian and Erwin Rommel in the French campaign of 1940; both of these men, seeing the chaos ahead of them in the Allied rear after breaching Allied lines at the Meuse, chose to disregard orders from the High Command to halt and wait for supporting units to catch up and instead plunged ahead towards the French coast.<sup>71</sup> Their superiors, quickly realizing the opportunity their wayward subordinates had uncovered, quickly reinforced these bold thrusts, which eventually resulted in the encirclement of Allied forces at Dunkirk, which all but guaranteed the German victory over France. Beyond famous high level examples such as the above, the war saw countless examples of small German units, right down to individuals companies, platoons and squads, launching attacks or counterattacks on their own initiative as situations demanded. Though this tendency did not always yield positive results, as such actions and reactions could prove extremely costly if their opponents managed to muster sufficient firepower to meet them, it at the very least ensured that the German forces were often able to seize or at least dispute the initiative from their Allied opponents, forcing them to react and diverting efforts and resources from any offensive efforts of their own.

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<sup>70</sup> Echevarria, "Auftragstatik in its Proper Perspective," p. 54; French, *Raising Churchill's Army*, p. 21; Samuels, *Command or Control?*, pp. 10, 15.

<sup>71</sup> Citino, *The German Way of War*, p. 287.

### CHAPTER 3: THE ROLE OF GERMAN TACTICAL AND COMMAND DOCTRINE IN OPERATION MARKET GARDEN

Given the nature of German doctrine and training as discussed in the preceding chapter, it should hardly come as any sort of surprise that the German reaction to Market Garden was both rapid and ferocious. Firstly, it is worth noting that the initial Allied airborne landings at Arnhem, Nijmegen and Eindhoven achieved almost total operational and tactical surprise, with both German after action reports and the fact that Field Marshal Model himself came very close to capture at his Army Group B headquarters in Oosterbeek's Tafelberg Hotel, less than three miles from the principal British drop/landing zones, attesting to the fact that the Germans were caught entirely off guard.<sup>72</sup> Moreover, the war diaries of the Allied units involved in the drops almost universally describe facing only the most minimal resistance during and immediately after the landings, with only a few scattered individual German soldiers fleeing or being taken prisoner; that of the 1<sup>st</sup> Parachute Battalion described the drop as "perfect, just like an exercise."<sup>73</sup> An old myth that attributed the presence of the II SS Panzer Korps just north of Arnhem to the betrayal of the date and location of the landings to the Germans by a Dutch double agent has long since been disproven by both participants and historians.<sup>74</sup> In fact, the corps had been sent to Arnhem specifically because it was seen as a quiet, out of the way place where the corps could recover and refit from the severe battering it had suffered in Normandy in relative peace.<sup>75</sup> The German command certainly had anticipated an Allied ground offensive in the sector, as the 2<sup>nd</sup> Army's massive buildup behind the Neerpelt bridgehead was hard to miss.<sup>76</sup> However, though von Rundstedt and Model were

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<sup>72</sup> BA/MA RS 2-2/34 Reg. Tgb. Nr. 917/44, *Generalkommando II SS Pz Korps, Ic*, 4<sup>th</sup> October 1944, p. 1; Robert J. Kershaw, *"It Never Snows in September" The German View of MARKET-GARDEN and The Battle of Arnhem, September 1944* (Hersham, UK: Ian Allan Publishing Ltd., 2004), p. 68; Ryan, *A Bridge Too Far*, pp. 186-87.

<sup>73</sup> WO 171/366 War Diary 1<sup>st</sup> Airborne Corps HQ, Appendix J – Summary of Statement by Lt. D.J. Simpson, RE, 1<sup>st</sup> Parachute Battalion, 23<sup>rd</sup> September 1944; WO 171/1248 War Diary 21<sup>st</sup> Independent Parachute Company, September 17<sup>th</sup> to 28<sup>th</sup>, p. 1.

<sup>74</sup> Horrocks, *A Full Life*, p. 213; R.E. Urquhart, *Arnhem* (London, Cassell, 1958), pp. 202-3; Powell, *The Devil's Birthday*, p. 92-93; Kershaw, *"It Never Snows in September,"* p. 41.

<sup>75</sup> Ryan, *A Bridge Too Far*, pp. 90-91; Guy LoFaro, *The Sword of St. Michael: The 82<sup>nd</sup> Airborne Division in World War II* (Philadelphia, PA: De Capo Press, 2011), p. 306.

<sup>76</sup> BA/MA RH 19 IV/56 OB West Fernschreiben, 15<sup>th</sup> September 1944; Peter Harclerode, *Arnhem: A Tragedy of Errors* (London: Arms and Armour Press, 1994), p. 35.

wary of the possibility of Allied airborne operations given the known presence of the 1<sup>st</sup> Allied Airborne Army in the Allied reserves, they had had expected that such an operation would be launched either in support of an assault on the Siegfried Line further south in the American sector, or in support of further amphibious landings along the Dutch coast; though the bridges at Arnhem and Nijmegen were certainly seen as possible targets, landings there were not seen as particularly likely.<sup>77</sup>

Despite the shock that the landing of three Allied airborne divisions well behind their lines produced, the German command reacted almost immediately to the new threat. Having fled from the Allied landings, Model's HQ was left temporarily out of action in the early stages of the battle, as he relocated to General Wilhelm Bittrich's II SS Panzer Korps headquarters at Doetinchem, 16 miles east of Arnhem.<sup>78</sup> This brief "decapitation" of Army Group B, however, had minimal impact upon the ability of the German forces to respond to the landings. Receiving the first report of the landings at 1330, fifteen minutes after the first troops touched down, General Bittrich immediately alerted his two divisions and ordered them to mobilize.<sup>79</sup> As previously mentioned the 9<sup>th</sup> and 10<sup>th</sup> SS Panzer Divisions had been badly weakened by their battles in Normandy, and were left a mere shadow of their original strength, mustering a total of perhaps 6,000 to 7,000 men out of their original combined strength of nearly 36,000; 16-32 tanks and assault guns out of 382; and about 70 armoured cars and half-tracks out of an original 606.<sup>80</sup> In spite of this much reduced strength, these divisional battlegroups remained a potent force, comprising mostly well-trained, well-equipped, well-led and highly experienced troops, and would quickly become the backbone of the German defence against Market Garden.<sup>81</sup>

The rapid reaction of the two SS divisions in the face of the airborne threat benefitted not only from the normal German doctrine and training for rapid and decisive action, but also from the fact that

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<sup>77</sup> Ryan, *A Bridge Too Far*, pp. 53, 124; LoFaro, *The Sword of St. Michael*, p. 326.

<sup>78</sup> BA/MA RH 19 IV/56 *Meldung Heeresgruppe B, Oberst i.G. von Templehof*, 1640, 17<sup>th</sup> September 1944; A.D. Harvey, *Arnhem* (London: Cassell & Co., 2001), p. 64.

<sup>79</sup> BA/MA RS 2-2/32 *Zusammengefaßter Bericht des II. SS-Pz. Korps über die Kämpfe in Raume Arnheim, mit 3 Kartenskizzen*, 10.9 – 15.10 1944, p. 1.

<sup>80</sup> Michael Reynolds, *Sons of the Reich: II SS Panzer Corps – Normandy, Arnhem, the Ardennes and on the Eastern Front* (Barnsley, UK: Pen & Sword Military, 2009), pp. 91, 102; Kershaw, *"It Never Snows in September,"* pp. 16, 38-39.

<sup>81</sup> Ritchie, *Arnhem – Myth and Reality*, p. 128.

both had undergone an extensive program of anti-airborne training and exercises in late 1943, while serving as part of General Geyr von Schweppenburg's Panzergruppe West in France. This training taught them that the best way to counter airborne landings was to counterattack against them as quickly as possible, ideally before they could properly organize in the wake of their landings.<sup>82</sup> Moreover, it heavily reemphasized the need for initiative and fast decision making at all levels of command to be able to react and respond quickly enough in the face of such a surprise attack; Oberführer Heinz Harmel, commanding officer of the 10<sup>th</sup> SS Panzer Division, later noted "At the lower end, NCOs and officers were taught to react quickly and make their own decisions. NCOs were taught not to wait until an order came, but to decide for themselves what to do. This happened during the fighting all the time."<sup>83</sup>

Thus in part because of this training, and in part because of Model's ongoing concerns about the looming presence of the Allied airborne force, the remnants of the 9<sup>th</sup> SS Division, while awaiting trains to take them back to Germany to refit, had been reorganized into nineteen motorized, company-sized "Alarmeinheiten" (alarm units) dispersed at various road junctions throughout the Arnhem area to maximize their ability to detect and rapidly respond to any sudden Allied airborne attack – all being within two hours march or a ½ hour drive of Arnhem.<sup>84</sup> For similar reasons, the 10<sup>th</sup> SS Panzer Division, which was to remain in the Arnhem area for its own refit and had been reinforced by elements drawn from the withdrawing 9<sup>th</sup>, was reorganized into several battalion-sized battle groups, forming a brigade-sized combat group that was redesignated "Kampfgruppe (KG) Frundsberg."<sup>85</sup>

Due to these measures, the two divisional groups were well disposed to respond to Bittrich's alarm when it came. Most of the various Kampfgruppen and alarm units received the alert message within

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<sup>82</sup> Wilhelm Tieke, *In the Firestorm of the Last Years of the War: II. SS-Panzerkorps with the 9. and 10. SS-Divisions "Hohenstaufen" and "Frundsberg."* (Winnipeg, MN: J.J. Fedorowicz, 1999), p. 4; Kershaw, *"It Never Snows in September,"* p. 41.

<sup>83</sup> Quoted in Kershaw, *"It Never Snows in September,"* p. 41.

<sup>84</sup> BA/MA RS 2-2/32 *Zusammengefaßter Bericht des II. SS-Pz. Korps über die Kämpfe in Raume Arnheim, mit 3 Kartenskizzen*, 10.9 – 15.10 1944, p. 7; Harclerode, *Arnhem: A Tragedy of Errors*, p. 37; Tieke, *In the Firestorm of the Last Years of the War*, p. 230; Ritchie, *Arnhem – Myth and Reality*, p. 128.

<sup>85</sup> BA/MA RH 19 IX/5 *Fernschrieben von Oberkommando der Heeresgruppe B an II. SS-Panzer Korps*, 1345, 9<sup>th</sup> September 1944; BA/MA RH 19 IX/5 *Fernschrieben von Oberkommando der Heeresgruppe B an II. SS-Panzer Korps*, 2200, 13<sup>th</sup> September 1944; Kershaw, *"It Never Snows in September,"* pp. 39-40; Tieke, *In the Firestorm of the Last Years of the War*, p. 223.

a matter of minutes and were mobilized and ready for action in between fifteen minutes and two hours, depending upon their individual status and dispositions.<sup>86</sup> This feat of organization was achieved in spite of the fact that both divisions were under the command of mere Lieutenant-Colonels at the time, with Obersturmbannführer Walter Harzer having been filling in for a wounded Brigadeführer Sylvester Stadlter at the head of the 9<sup>th</sup> SS Division since August, and Frundsberg's Harmel away in Berlin in search of further reinforcements (though he returned the next day after driving through the night from the capital), leaving the Frundsberg KG in the hands of an Obersturmbannführer Pätsch.<sup>87</sup> Clearly these deputies, and their various subordinates, stepped up admirably to the demands of the situation despite the relative absence of senior officers on the spot.

Despite the extremely fragmented, confusing, and generally limited information getting back to his HQ at this time regarding the Allied offensive, with wildly varying estimates of the strength of the Allied landings and numerous false reports of landings coming in from across eastern Holland and the German border regions, Bittrich, with his subordinate units already readying themselves for battle, decided to take action on what little information he already had, rather than waste any time waiting for the situation to clear up, or for instructions from Model.<sup>88</sup> Less than two hours after he received the initial word of the landings, Bittrich accurately concluded that, with the bulk of the Allied landings seemingly concentrated around Arnhem and Nijmegen, the bridges in each city were their most likely targets, and had hastily drawn up a battle plan for his corps, directing the 9<sup>th</sup> SS Division to advance through and secure Arnhem before attacking the Allied landing zones west of the city, while KG Frundsberg was to proceed to and secure the bridges at Nijmegen.<sup>89</sup>

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<sup>86</sup> BA/MA RS 3-10/4 *Fernschreiben von 9. SS-Panzer Division "Hohenstaufen," Abt. Ia, an General Kommando der II. SS-Panzer Korps, Ia, "Erfahrungen über Abwehr von Fallschirmtruppen bei Arnhem,"* 28<sup>th</sup> September 1944, p. 2; Reynolds, *Sons of the Reich*, p. 115.

<sup>87</sup> Harvey, *Arnhem*, p. 80; Kershaw, *"It Never Snows in September,"* p. 11; Reynolds, *Sons of the Reich*, p. 121; Ryan, *A Bridge Too Far*, pp. 199, 255.

<sup>88</sup> BA/MA RH 19 IV/56 *Meldung von Hauptmann Raeßler*, 1315, 17<sup>th</sup> September 1944; BA/MA RH 19 IV/56, *"Notiz,"* 1550, 17<sup>th</sup> September 1944.

<sup>89</sup> BA/MA RS 2-2/32 *Zusammengefaßter Bericht des II. SS-Pz. Korps über die Kämpfe in Raume Arnhem, mit 3 Kartenskizzen*, 10.9 – 15.10 1944, pp. 1-2, 4; BA/MA RH 19 IV/56, *Meldung von Heeresgruppe B Oberst i.G. von*

Upon his arrival at Bittrich's HQ at about 1500, Model took command of the situation, instructing that Bittrich's corps would henceforth be operating directly under Army Group B, but, with regards to the corps, he simply approved and confirmed the measures that Bittrich had already taken without any changes of note.<sup>90</sup> Instead, he simply incorporated the efforts of Bittrich's corps into a broader plan for the entire Army Group, issuing instructions to the three other major units under his command to counterattack the landings in their respective sectors and secure any local river and canal crossings, much as Bittrich had done with the II SS Panzer Korps. Before midnight on the 17<sup>th</sup>, Model had ordered the 1<sup>st</sup> Fallschirmarmee (Parachute Army) to counterattack the American landings (by the 101<sup>st</sup> Airborne Division) in the Eindhoven area, for the forces of Wehrkreis Kommando (Military District Command) VI to support the efforts of the Frundsberg KG against Nijmegen, and for the various rear area security units operating under Wehrmachtbefehlshaber Niederlande (Armed Forces Command Netherlands) to support the efforts of the 9<sup>th</sup> SS Panzer Division by attacking the British landing zones near Arnhem from the west (the 9<sup>th</sup> was to attack from the east).<sup>91</sup>

With this series of orders, issued between 2215 and 2315 on the night of the 17<sup>th</sup>, Model effectively completed the greater part of his role as the overall operational level commander of the defence against Operation Market Garden, sending his forces into action with a plan that would remain broadly in effect through to the withdrawal of the British 1<sup>st</sup> Airborne Division on the night of September 25<sup>th</sup>/26<sup>th</sup>, changing only in matters of detail and emphasis. Less than twelve hours after the initial landings, in spite of the great expectations of the Allied planners that their shock effect would all but paralyze the defenders, German forces all throughout Holland and along the German border were in

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Templehof, 1640, 17<sup>th</sup> September 1944; Kershaw, *"It Never Snows in September,"* p. 75; Tieke, *In the Firestorm of the Last Years of the War*, p. 233.

<sup>90</sup> BA/MA RH 19 IX/5 *Fernschreiben von Oberkommando der Heeresgruppe B, Ia an II. SS-Panzer Korps*, 2315, 17<sup>th</sup> September 1944; BA/MA RS 2-2/32 *Zusammengefaßter Bericht des II. SS-Pz. Korps über die Kämpfe in Raume Arnhem, mit 3 Kartenskizzen*, 10.9 – 15.10 1944, p. 2.

<sup>91</sup> BA/MA RH 19 IV/56 *Orientierung durch Ia Heeresgruppe B*, 17<sup>th</sup> September 1944; BA/MA RH 19 IX/5 *Fernschreiben von Oberkommando der Heeresgruppe B Ia an WB Ndl.*, 2215, 17<sup>th</sup> September; BA/MA RH 19 IX/5 *Fernschreiben von Oberkommando der Heeresgruppe B, Ia an II. SS-Panzer Korps*, 2315, 17<sup>th</sup> September 1944; BA/MA RH 19 IX/5 *Fernschreiben von Oberkommando der Heeresgruppe B Ia an Wehrkreis-Kommando VI*, 2315, 17<sup>th</sup> September; BA/MA RH 19 IX/5 *Fernschreiben von Oberkommando der Heeresgruppe B Ia an Fallschirm AOK 1*, 2315, 17<sup>th</sup> September 1944.

motion to oppose them, in spite of the fact that the overall situation was still largely unclear to their senior commanders. Moreover, the most critical elements of that defensive plan had been put into action by relatively junior officers, with a mere corps commander effectively commencing the main German defensive reaction on his own initiative and in the face of limited information.

It is also notable that neither Model nor Bittrich included any specific details on how their subordinates were to conduct their operations, merely assigning them specific sectors in which they were responsible for counterattacking any enemy forces present. At this point of the battle the higher HQs had only a bare minimum of incomplete and often contradictory information on the overall situation and, as such, they counted heavily upon the ability of their subordinate commanders to assess their individual local situations and make their own tactical and minor operational decisions within the overall framework of the plan – measures that were, again, entirely consistent with the principles of German doctrine and training discussed above. The fact that the principles of *Auftragstaktik* that were so prominent in the doctrine and training of the German forces allowed the various sub-units of Army Group B to operate effectively with only the most basic guidance from above not only greatly simplified Model and Bittrich's command efforts, it also compensated for the rather limited and patchy status of command and communications arrangements that was prevalent throughout German forces in the West in the wake of the defeat in France. General Gustav-Adolf von Zangen, commander of the 15<sup>th</sup> Army and whose advance units soon joined the battle in the Eindhoven area, later noted that he was never able to establish more than the bare minimum of contact with Model's HQ, ensuring that he was largely left to his own devices in leading his units.<sup>92</sup> Von Zangen further stated that this degree of freedom was vital to his effective waging of the battle, as Model could never be given a clear enough idea of the details of the 15<sup>th</sup> Army's situation to effectively direct its efforts from his distant HQ.<sup>93</sup> Given that the battle as a whole was waged largely by a "crazy-quilt" assemblage of hastily improvised battle groups, many with minimal communications

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<sup>92</sup> Gustav-Adolf von Zangen, *Battles of the Fifteenth Army Between the Meuse-Scheldt Canal and the Lower Meuse*. MS # B-475 (Allendorf: US Army Historical Division, Foreign military Studies Collection, 1947), p. 18.

<sup>93</sup> Von Zangen, *Battles of the 15<sup>th</sup> Army*, p. 46.

equipment, it would have been almost impossible for Model to command centrally, had he been inclined to do so.

For the remainder of the battle, Model acted less as a supreme operational commander and more as a coordinator and facilitator, traveling to the various HQs of his subordinates to assess their situations and encourage their efforts, and calling up reinforcements and resources from the Reich and allocating them wherever they were needed.<sup>94</sup> The German practice of *Auftragstaktik* thus allowed Model to conduct the battle with a relatively light hand, trusting his sector and sub-unit commanders to conduct their own battles, while he concentrated the efforts of his own HQ on matters that *could* be effectively managed centrally, such as logistics and the allocation of reserves. Overall, the effectiveness of the response of German higher commanders in the fighting in Holland in September 1944 relied heavily upon the principles of independent and aggressive combat leadership instilled through their forces by their long-standing doctrine and training.

At the tactical level, perhaps the most exemplary case of the vital role that the German doctrine of small-unit aggression and initiative played in Market Garden was that of *Sturmbannführer* (Battalion Commander) Josef Krafft and his SS-Panzer Grenadier Ausbildungs und Ersatz Battalion (motorized infantry training and replacement battalion) 16 in the early hours of the battle on the 17<sup>th</sup> of September. Krafft's was an NCO training unit that had been sent to Holland to serve in a garrison role while it trained, comprising twelve officers, sixty-five instructor NCOs, 229 partially trained men, and an eclectic assortment of support weaponry that included mortars, anti-tank and anti-aircraft guns, and heavy rocket launchers.<sup>95</sup> When the British landings began just before 1330 on the 17<sup>th</sup>, Krafft was exercising his unit in the fields and woods near the western Arnhem suburb of Oosterbeek. Upon sighting the incoming gliders and parachutists, he, like Bittrich, very quickly guessed that the nearby bridges over the Lower Rhine at Arnhem were their most likely target and immediately sent his unit into action. Though he

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<sup>94</sup> Ryan, *A Bridge Too Far*, p. 222; Tieke, *In the Firestorm of the Last Years of the War*, p. 247; Kershaw, *"It Never Snows in September,"* p. 228; Reynolds, *Sons of the Reich*, p. 142.

<sup>95</sup> WO 205/1124 *Battle of Arnhem, SS Panzer Grenadier Depot & Reserve Battalion 16 – German War Diary*, p.1; Martin Middlebrook, *Arnhem 1944: The Airborne Battle, 17-26 September* (Barnsley, UK: Pen & Sword Military, 1994), p. 118.

initially set out to counterattack the British airhead with one of his three companies, he was quickly forced to fall back in the face of the overwhelming British numerical superiority. He then turned to forming a blocking line between the landing zones and Arnhem, covering the two most northerly of the three main roads into the city from the west, and hoping to at least delay the enemy advance long enough for reinforcements to be mustered to hold the city.<sup>96</sup> Though Krafft was likely aware that the heavily wooded and urbanized terrain on the western approaches to Arnhem would help to conceal the miniscule numbers of his force, and thus maximize the delaying effect their defence might have, it also seems that simply retreating back to Arnhem or beyond in the face of this superior force was something he never seriously considered; given that German doctrine recommended taking the most aggressive course of action that was possible, if Krafft could not attack then he would defend the objective as far forward as he could.

Krafft's small force quickly exerted an effect on the British advance far out of proportion to its numerical strength. The 1<sup>st</sup> Airborne Division's 1<sup>st</sup> Airborne Reconnaissance Squadron, which had been ordered to stage a "coup de main" to secure the primary Arnhem road bridge by rushing there from the landing zones up the main Ede-Arnhem road in their machine-gun armed jeeps, ran into the northern end of Krafft's line soon after they set off. The leading troop was quickly shot up by fire from Krafft's machine guns and mortars, which quickly destroyed the first two jeeps in the column, pinned down the rest of the troop in a two-hour firefight, and eventually forced the entire squadron to abandon their mission and retreat.<sup>97</sup>

The 16<sup>th</sup> Battalion then faced the main British assault by the three battalions of the 1<sup>st</sup> Parachute Brigade. The advance of 1<sup>st</sup> and 3<sup>rd</sup> Parachute Battalions along the northern and central roads, respectively, quickly stalled in the face of Krafft's fire, with both being held up for several hours in a series of confused firefights and suffering fairly significant casualties in the process; though it is

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<sup>96</sup> WO 205/1124 *Battle of Arnhem, SS Panzer Grenadier Depot & Reserve Battalion 16 – German War Diary*, pp. 2-5.

<sup>97</sup> WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division, 1<sup>st</sup> Parachute Brigade Operational Order No. 1 – Operation Market, Annexure D- JA Hibbert, Brigade Major of 1<sup>st</sup> Para Bde, 13<sup>th</sup> Sept 1944*; WO 171/406 *Original War Diary 1<sup>st</sup> Airborne Recce Squadron, War Diary, C Troop*; Harclerode, *Arnhem: A Tragedy of Errors*, pp. 69-71; Middlebrook, *Arnhem 1944*, pp. 123-26.

impossible to accurately assess the specific casualties that Krafft's men inflicted on the British paratroops, it is likely that they inflicted the majority of the approximately 40 dead, 100 wounded, and 100 prisoners that the 1<sup>st</sup> Parachute Brigade lost on the 17<sup>th</sup>.<sup>98</sup> The British 2<sup>nd</sup> Parachute Battalion, under Lieutenant-Colonel John Frost, along with elements of the 1<sup>st</sup> Parachute Brigade HQ, did, however, manage to slip through to the bridge by nightfall on the southern river bank road. Though some authors have credited Frost's superior sense of drive and urgency with allowing him to succeed where the other battalions failed, in that he kept his men moving quickly through the limited resistance they faced from German patrols and security troops, it seems clear that his success owed at least as much to simple luck, in that he managed to draw the one unoccupied road and thus to march his battalion past the southern flank of Krafft's short line.<sup>99</sup>

North of Frost's breakthrough, the 3<sup>rd</sup> Battalion eventually managed to outflank and bypass Krafft's blocking line, leading him to retreat towards Arnhem at dusk to avoid a possible encirclement. By the time Krafft fell back, however, the first elements of a much stronger blocking force, Kampfgruppe Spindler of the 9<sup>th</sup> SS Panzer Division, were taking up defensive positions in the Arnhem suburbs. These forces managed to bring the two British battalions to a final halt for the night and, joined by Krafft's survivors and a steady flow of reinforcements throughout the night, had established a firm blocking line across all the routes to Arnhem by the morning of the 18<sup>th</sup>.<sup>100</sup> Krafft's rapid and aggressive response in the face of a much superior landing force thus inflicted a critical delay upon the British advance that almost entirely unraveled the 1<sup>st</sup> Airborne Division's battle plan, ensuring that only about 750 of the nearly 2,500 men that had originally set out for the Arnhem bridges were actually able to reach them as planned.<sup>101</sup>

Though Krafft, an ambitious and obsequious braggart and a devoted Nazi, exaggerated the scale of his accomplishments in his after action report, which he forwarded directly to Heinrich Himmler as a

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<sup>98</sup> Middlebrook, *Arnhem 1944*, p. 162.

<sup>99</sup> Harvey, *Arnhem*, p. 78.

<sup>100</sup> WO 205/1124 *Battle of Arnhem, SS Panzer Grenadier Depot & Reserve Battalion 16 – German War Diary*, pp. 10-15.

<sup>101</sup> Middlebrook, *Arnhem 1944*, p. 162.

birthday gift, the actual achievements that he and his troops made at Arnhem were significant enough.<sup>102</sup> Had Krafft not chosen to engage the British advance as he did, it is quite possible that the entire 1<sup>st</sup> Parachute Brigade, along with the over 250 men of the 1<sup>st</sup> Airborne Reconnaissance Squadron, may well have been able to follow the example of the 2<sup>nd</sup> Parachute Battalion, reaching the Arnhem road bridge before the forces of the II SS Panzer Corps were able to fully mobilize and reach the city, and establishing a much stronger position around the bridge that may well have been able to hold out until relieved by XXX Corps. Regardless of these counterfactuals, it is notable that General Urquhart himself believed that Krafft's force was a primary factor in the 1<sup>st</sup> Airborne Division's failure on the 17th, stating that the 16<sup>th</sup> Battalion had "done more than any other Germans to delay us."<sup>103</sup> Krafft's successes were a clear and rather exemplary product of the principles of Auftragstaktik and dynamic leadership, in that he saw a threatening situation developing and decided to act immediately and without orders, anticipating his likely mission of defending the Arnhem bridges, working to do whatever he could with his limited resources to disrupt the enemy effort, and operating boldly in full confidence that, following the same doctrine he was, other forces would soon be advancing to his aid.

The actions of these "other forces" of the wider German defensive response at Arnhem were also heavily characterized by Auftragstaktik driven initiative and boldness. As stated above, as the various scattered alarm units and Kampfgruppen of the II SS Panzer Corps began to receive Bittrich's alarm order, or simply saw the incoming airborne forces, they began to ready themselves for action and move towards the battle developing just west of Arnhem. General Urquhart cited the testimony of an anonymous SS major who arrived in Arnhem shortly after the landings to find the town filled with frantic activity, as various junior officers and NCOs gathered up whatever men were at hand, assembled them into their alarm units, and began leading them towards the new front.<sup>104</sup> SS Corporal Rudolf Trapp of the 10<sup>th</sup> SS Panzer Division similarly reported his small company advancing alongside others through the

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<sup>102</sup> WO 205/1124 *Battle of Arnhem, SS Panzer Grenadier Depot & Reserve Battalion 16 – German War Diary*, pp. 13-14; Harvey, *Arnhem*, p. 68; Powell, *The Devil's Birthday*, p. 96.

<sup>103</sup> R.E. Urquhart, *Arnhem* (London, Cassell, 1958), p. 47.

<sup>104</sup> Urquhart, *Arnhem*, p. 41.

streets of Arnhem in whatever transportation they could beg, borrow, or steal, eagerly seeking out the battle.<sup>105</sup> A German after action report commented upon the considerable value of these small, independent alarm units in responding to the airborne incursion, noting that they could be mobilized very quickly and did so largely on their own initiative once alerted.<sup>106</sup> Some of these units even began to engage the British before they were fully formed up, buying time for the wider mobilization; Corporal Wolfgang Dombrowski of the 9<sup>th</sup> SS Panzer Division's Kampfgruppe Möller, for example, reported that the four truck convoy in which he was travelling advanced straight to the outskirts of Oosterbeek where they came under fire, with his section then immediately dismounting and engaging the enemy until dark.<sup>107</sup>

As Bittrich and Model began to assert a greater degree of influence over the operation, these scattered alarm units were quickly combined into larger Kampfgruppen. The most notable of these groups, assembled to secure Arnhem by establishing a blocking line along the city's western outskirts was the previously mentioned Kampfgruppe Spindler, under the command of the 9<sup>th</sup> SS Division Artillery Regiment's commander SS-Obersturmbannführer Ludwig Spindler.<sup>108</sup> It is worth noting that, despite being deployed as an infantry battlegroup, KG Spindler fielded relatively few "proper" infantrymen, with the bulk of its troops being drawn from the 9<sup>th</sup> SS Division's specialist and support units. At the core of the battle group were the 120 to 350 survivors (accounts vary) of Spindler's own artillerymen, who had given up their last remaining guns to the 10<sup>th</sup> SS Division and operated as two infantry companies. They were joined by the division's engineers (Kampfgruppe Möller), its Panzerjäger (tank destroyer) battalion (Kampfgruppe von Allworden), Kampfgruppe Harder's dismounted tankers and fitters from the division's Panzer regiment, and Kampfgruppe Gropp's former flak gunners, alongside the four remaining companies of the division's two Panzergrenadier Regiments. With most of their heavy weapons and vehicles lost on

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<sup>105</sup> Cited in Kershaw, *"It Never Snows in September,"* pp. 90-91.

<sup>106</sup> BA/MA RS 2-2/34 Reg. Tgb. Nr. 917/44, *Generalkommando II SS Pz Korps, Ic*, 4 October 1944, pp. 2-3.

<sup>107</sup> Kershaw, *"It Never Snows in September,"* p. 91; Ryan, *A Bridge Too Far*, pp. 222-23; Tieke, *In the Firestorm of the Last Years of the War*, pp. 233-34, 237.

<sup>108</sup> BA/MA RS 2-2/32 *Zusammengefaßter Bericht des II. SS-Pz. Korps über die Kämpfe in Raume Arnhem, mit 3 Kartenskizzen*, 10.9 – 15.10 1944, pp. 3-4.

the retreat from France, or turned over to the 10<sup>th</sup> SS, the bulk of these varied troops, like Spindler's gunners, fought as light infantry for the duration of the battle, taking advantage of their aforementioned basic tactical infantry training.<sup>109</sup> The battle group also incorporated reinforcements drawn from whatever other units were close at hand, including training units, naval recruits, and an understrength battalion of Reichsarbeitsdienst (RAD) (National Labour Service) men, all of whom were incorporated into the existing SS units under experienced officers and NCOs.<sup>110</sup>

In spite of the lack of infantry experience among its officers and men and its polyglot nature, the battle group mobilized and formed up extremely quickly, being assembled and ordered into action by 1700 on the 17<sup>th</sup>, less than four hours after the landings.<sup>111</sup> As mentioned above, the leading elements of Kampfgruppe Spindler had begun taking up blocking positions just west of Arnhem by nightfall on the 17<sup>th</sup> and by morning, Spindler had assembled a solid line of seven or eight weak battalions mustering over 1,500 SS troops alongside an unknown number of others.<sup>112</sup> This line held out in the face of every effort by the 1<sup>st</sup> Airborne Division's 1<sup>st</sup> and later 4<sup>th</sup> Parachute Brigades to break through to their comrades at Arnhem through the 18<sup>th</sup> and 19<sup>th</sup>, with a final defensive action and counterattack on the 19<sup>th</sup> effectively destroying both brigades and ending the British offensive.<sup>113</sup> As SS-Hauptsturmführer (company commander) Hans Möller of the eponymous Kampfgruppe later, and rather dramatically, noted, "desperate attacks were repelled time after time...it was quite obvious they were probing the front for a soft spot, but their attacks failed there also, withering in the well-aimed fire of the Waffen-SS."<sup>114</sup>

In the aftermath of this defensive success Kampfgruppe Spindler, in accordance with German doctrine, immediately shifted to the offensive, pursuing the British parachute brigades back to the defensive perimeter forming at Oosterbeek and then keeping up a steady, if rather slow and often disorganized,

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<sup>109</sup> Kershaw, *"It Never Snows in September,"* pp. 103-4; Harclerode, *Arnhem: A Tragedy of Errors*, p. 80; Reynolds, *Sons of the Reich*, pp. 116, 118-19.

<sup>110</sup> Harvey, *Arnhem*, p. 103; Ryan, *A Bridge Too Far*, pp. 266-67; Tieke, *In the Firestorm of the Last Years of the War*, pp. 244, 249.

<sup>111</sup> BA/MA RS 3-9/45 *Funkspruch Nr. 182*, 1700, 17<sup>th</sup> September 1944.

<sup>112</sup> Kershaw, *"It Never Snows in September,"* p. 165; Harclerode, *Arnhem: A Tragedy of Errors*, p. 90; Harvey, *Arnhem*, p. 103.

<sup>113</sup> Reynolds, *Sons of the Reich*, p. 130.

<sup>114</sup> Quoted in Kershaw, *"It Never Snows in September,"* p. 108.

pressure on them for the next week, pushing steadily through Oosterbeek a block at a time against an enemy that Spindler reported as “fighting extremely tenaciously and bitterly.”<sup>115</sup> Though these efforts proved extremely costly to Spindler’s improvised force, with Spindler reporting at least 16 men dead and 96 wounded in just a single 24-hour period, and his battle group as a whole being described as reduced to near the point of combat-ineffectiveness by the 25<sup>th</sup>, their steady advance also entirely prevented the British airborne troops from retaking the initiative or making any offensive moves of their own until their evacuation on the night of the 25<sup>th</sup>/26<sup>th</sup>. It is thus hardly surprising that Bittrich’s after action report recognized Kampfgruppe Spindler as one the most critical contributors to his corps’ victory at Arnhem.<sup>116</sup>

At the same time, on the opposite side of the British landing zones, a second improvised battle group, Gruppe von Tettau, initially assembled from a variety of Army, SS, Navy, and Luftwaffe security, garrison, and training units drawn from the Wehrmachtbefehlshaber Niederlande (WB Ndl) for security duties along the Waal river, was mobilized to attack the 1<sup>st</sup> Airborne Division from the west.<sup>117</sup> Despite the generally low quality of its troops, which comprised mostly older men with minimal combat experience, Gruppe von Tettau, like Kampfgruppe Spindler, was mobilized within a matter of hours, and its leading units were closing on the western edge of the British landing zones by nightfall on the 17<sup>th</sup>. The Gruppe probed the lines of the 1<sup>st</sup> Airlanding Brigade’s 1<sup>st</sup> Battalion, the Border Regiment (1<sup>st</sup> Borders) and 7<sup>th</sup> Battalion, The King’s Own Scottish Borderers (7<sup>th</sup> KOSB) through the night of the 17<sup>th</sup> to 18<sup>th</sup>, and in the morning of the 18<sup>th</sup> staged a full scale attack that made considerable progress before being

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<sup>115</sup> BA/MA RS 3-9/45 *Ia- Tagesmeldung, Kampfgruppe Spindler an SS-Panzerdivision Hohenstaufen, vom 23.9, 1830 bis 24.9.44, 1900*; BA/MA RH 19 IV/56 *Fernschreiben*, 20<sup>th</sup> September 1944; BA/MA RH 19 IX/10 *Tagesmeldung 25.9 von Heeresgruppe B, Ia an OB West*.

<sup>116</sup> BA/MA RS 2-2/32 *Zusammengefaßter Bericht des II. SS-Pz. Korps über die Kämpfe in Raume Arnheim, mit 3 Kartenskizzen*, 10.9 – 15.10 1944, p. 9.

<sup>117</sup> BA/MA RH 19 IX/5 *Fernschreiben von Oberkommando der Heeresgruppe B Ia an WB Ndl.*, 2215, 17<sup>th</sup> September; BA/MA RH 19 IV/56 *Tagesmeldung 17.9.44*, p. 3; WO 205/1124, *Battle of Arnhem, SS Panzer Grenadier Depot & Reserve Battalion 16 – German War Diary*, p. 1-2; Kershaw, *“It Never Snows in September,”* pp. 35-7; Harvey, *Arnhem*, p. 84. LoFaro, *The Sword of St. Michael*, p. 305.

forced back when the British second airlift came in behind the German force's northern flank, routing a battalion of Dutch SS troops.<sup>118</sup>

In spite of this early setback, Gruppe von Tettau kept up a steady, if generally limited, pressure across the western edge of the British perimeter right up until the evacuation.<sup>119</sup> This pressure forced the 1<sup>st</sup> Airborne Division to keep a fairly considerable portion of their limited forces in defensive positions along the western perimeter of their landing zones and divisional headquarters throughout the battle, even as the main effort and crisis of the battle was taking place at Arnhem to the east, effectively facing the division with a "two-front war." For most of the critical first two days of the battle, three airlanding battalions - over half of the British troops initially landed - were denied to the British offensive thrust, as they were needed to hold the landing zones for the second lift; even after that lift arrived on the afternoon of the 18<sup>th</sup>, releasing the 2<sup>nd</sup> Battalion, South Staffordshire Regiment (2<sup>nd</sup> South Staffs) and the 7<sup>th</sup> KOSB from their defensive duties, the 1<sup>st</sup> Borders remained on the western perimeter, opposing Gruppe von Tettau, for the rest of the battle.<sup>120</sup>

Moreover, the fact that all the various sub-units of Gruppe von Tettau kept up a steady offensive throughout the fighting, however weakly pressed home it was, led to one of the major "coups" of the battle. On the 21<sup>st</sup>, one of those units, the Worowski Battalion of the Hermann Göring Training Regiment, attacked the Westerbouwing Heights on the northern bank of the Lower Rhine, which overlooked the ferry site at Heveadorp, the last viable crossing point over the river remaining in British

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<sup>118</sup> BA/MA RH 26-604/1 *Divisions-Befehl Nr. 10, Führungs und Ausbildungsstab WBN, Anlage 1*, 19<sup>th</sup> September 1944; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division – Report on Operation "Market", Arnhem 17-26 Sept. 1944*, pp. 9-10; WO 171/1323 *War Diary 7<sup>th</sup> (Galloway) Battalion, King's Own Scottish Borderers*, 17<sup>th</sup> September to 18<sup>th</sup> September; Harvey, *Arnhem*, p. 99; Harclerode, *Arnhem: A Tragedy of Errors*, pp. 87-88; Kershaw, *"It Never Snows in September,"* pp. 113-14.

<sup>119</sup> BA/MA RH 19 IV/56 *OB West Mittagsmeldung vom 19.9.44*; BA/MA RH 19 IV/56 *OB West Mittagsmeldung vom 20.9.44*; BA/MA RH 19 IX/10 *Tagesmeldung vom 23.9.44 von Heeresgruppe B an OB West*, p. 2; BA/MA RH 26-604/1 *Divisions-Befehl Nr. 11, Führungs und Ausbildungsstab WBN, Anlage 2*, 20<sup>th</sup> September 1944; BA/MA RH 26-604/1 *Divisions-Befehl Nr. 13 für die Fortsetzung des Angriffes am 21.9.44, Führungs und Ausbildungsstab WBN, Anlage 4*, 20 September 1944; BA/MA RH 26-604/1 *Divisions-Befehl Nr. 16 für die Fortsetzung des Angriffes am 24.9.44, Führungs und Ausbildungsstab WBN, Anlage 7*, 24<sup>th</sup> September 1944; BA/MA RH 26-604/1 *Divisions-Befehl Nr. 17 für die Fortsetzung des Angriffes am 25.9.44, Führungs und Ausbildungsstab WBN, Anlage 9*, 25<sup>th</sup> September 1944.

<sup>120</sup> WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division – 1 Air Landing Bde – Operation Market, 17<sup>th</sup> to 26<sup>th</sup> Sept 1944, Annexure O.2*, pp. 2-7.

hands at that time. The battalion found those critical heights to be held only by elements of a single company from the badly overstretched 1<sup>st</sup> Borders, which it soon drove off, though, in light of its inexperience in infantry combat and poor tactics, it suffered nearly 50% losses in the process.<sup>121</sup> The loss of these heights ensured that, although elements of the 1<sup>st</sup> Polish Independent Parachute Brigade and the 43<sup>rd</sup> Infantry Division had managed to reach the southern bank of the Lower Rhine opposite Heveadorp by the 22<sup>nd</sup>, they remained entirely unable to pass any significant force over the river to reinforce the 1<sup>st</sup> Airborne Division for the rest of the battle, as the numerous German machine guns and artillery observation posts located on the heights made crossings impossible by day, and extremely difficult by night. Despite strenuous efforts by the Polish and British troops over several nights, only a few hundred men ever got over the river to the north bank, with the last effort by the 4<sup>th</sup> Battalion of the Dorsetshire Regiment (4<sup>th</sup> Dorsets) on the night of the 24<sup>th</sup>/25<sup>th</sup> being a bloody disaster that saw virtually the entire force that set out killed or taken prisoner.<sup>122</sup> The emphasis that German doctrine placed upon units taking and maintaining the offensive whenever and wherever possible thus paid off for Gruppe von Tettau, allowing it to keep the forces of the 1<sup>st</sup> Borders so thinly spread that a critical opportunity simply emerged right in front of one of their attacking units, which in turn quickly took the initiative and seized the critical ground before the British could perceive the threat and reinforce the Heights.

The successes of Kampfgruppe Spindler and Gruppe von Tettau were also testament to the value of the basic infantry and tactical training provided to all members of the Wehrmacht, enabling at least basically effective infantry units to be mustered from a mixed assortment of mostly non-infantrymen at short notice. The fact that these groups of extremely variable quality troops were able to gain the upper hand over well-trained paratroops in intense woodland and urban fighting – though admittedly usually

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<sup>121</sup> WO 171/589 War Diary HQ 1<sup>st</sup> Airlanding Brigade, Appendix A - Operation Market, p. 2; WO 171/393 War Diary HQ 1<sup>st</sup> Airborne Division – 1 Air Landing Bde – Operation Market, 17<sup>th</sup> to 26<sup>th</sup> Sept 1944, Annexure O.2, p. 9; Kershaw, “It Never Snows in September,” pp. 235-36; Middlebrook, *Arnhem 1944*, pp. 341-2.

<sup>122</sup> WO 205/1126 21 Army Group – Operation “Market Garden” – 17-26 September 1944, p. 64; WO 171/366 War Diary HQ 1<sup>st</sup> Airborne Corps – Appendix R: Message from 130 Brigade HQ to Phantom Air Corps Detachment, 0700, 25<sup>th</sup> Sept 1944, p. 1-2; WO 171/660 War Diary HQ 130 Infantry Brigade, 24<sup>th</sup> September to 25<sup>th</sup> September 1944; RH 19 IX/10 Tagesmeldung 25.9 von Heeresgruppe B, Ia an OB West.

with the benefit of local numerical superiority and at an extremely high cost - testifies to the effectiveness of German doctrine and training in enabling German officers and troops to rise to unexpected challenges.

Rapidity and ferocity also characterized the German reactions to Market Garden's other airborne landings at Nijmegen and Eindhoven, and those reactions were at least as critical to the outcome for the overall battle as those at Arnhem. Both of the American airborne divisions, with the 82<sup>nd</sup> Airborne Division landing around Groesbeek, just southeast of Nijmegen, and the 101<sup>st</sup> Airborne Division landing north of Eindhoven, encountered significantly less resistance in the immediate aftermath of the landings on the 17<sup>th</sup> than did their British counterparts to the north. Like the British, the American troops encountered only scattered individuals and small groups of line of communication and security troops on or around their landing zones, who were quickly subdued or driven off.<sup>123</sup> Unlike the British, the Americans then managed to rapidly secure the majority of their numerous bridge objectives, though the bridge at Son and two of the four bridges over the Maas-Waal Canal were demolished by German forces before they could be captured.<sup>124</sup> Overall, though, the initial effort by the two US divisions almost entirely lived up to the expectations of the Market Garden plan, in that the shock of their sudden landings allowed them to capture the bridges before any meaningful defence could be mustered.

This initial attack by the American airborne divisions left one critical objective unsecured, however: the two bridges over the Waal River at Nijmegen itself. This occurred mostly due to the presence of the Groesbeek Heights just southeast of the city, an area of high ground that rose about 300 feet above the surrounding polder land, and thus overlooked the entire area, including the bridges and the main north-south road along which XXX Corps was to advance. The heights were only a short distance from the Reichswald forest along the German border to the east, which Allied intelligence from both ULTRA codebreaking and Dutch resistance sources indicated was possibly being used as a sheltered mustering point for sizeable German forces, including armour; should forces from the Reichswald have

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<sup>123</sup> CAB 106/1056 82<sup>nd</sup> Airborne Division - Operation Market Historical Data, p. 4; WO 171/366 War Diary HQ 1<sup>st</sup> Airborne Corps – Appendix E: Message from 82<sup>nd</sup> Airborne G-2 to 1<sup>st</sup> Airborne Corps HQ, 1810, 17<sup>th</sup> September.

<sup>124</sup> Gavin, *On to Berlin*, pp. 155-60; CAB 106/1056 82<sup>nd</sup> Airborne Division - Operation Market Historical Data, p. 2; WO 205/871 A Graphic History of the 82<sup>nd</sup> Airborne Division: Operation "Market," Holland 1944, Map Plate #1 – D-Day through D+1.

managed to capture the Groesbeek Heights, a few artillery or mortar observation posts, anti-tank guns, and machine guns atop them would be able to completely dominate the main road with fire, preventing any advance to the north.<sup>125</sup> As such, both General Browning and Major-General James Gavin of the 82<sup>nd</sup> Airborne Division saw securing the Groesbeek Heights as a critical part of the 82<sup>nd</sup>'s mission, as all the bridges captured would be rendered effectively useless should the high ground be taken by the Germans. Moreover, the fact that the 82<sup>nd</sup>'s forces had to be divided amongst the various objectives to be captured in the area meant that significant compromises had to be made in the plan.

In the end, Browning ordered Gavin to only try to capture the Nijmegen bridges – the last link in the chain from the Maas to the Waal – after the Heights were secured, an allocation of priorities that Gavin fully concurred with, even with the benefit of hindsight in his memoirs.<sup>126</sup> Gavin, however, determined to gain control of all the objective bridges as quickly as possible, “tweaked” his orders, ordering the commander of the 508<sup>th</sup> Parachute Infantry Regiment (PIR) to send one of his three battalions to secure the bridges as soon as he felt the situation on the Heights was under control; he later admitted, however, that he perhaps did not properly clarify the importance of this supplementary instruction, as Colonel Lindquist of the 508<sup>th</sup> PIR only dispatched the force at around 1900, nearly eight hours after the landings, and then only sent two companies of his 1<sup>st</sup> Battalion.<sup>127</sup> This small force made its way through Nijmegen towards the bridges, but came under heavy fire at a traffic circle just south of the road bridge, which stopped their advance 400 yards short of the bridge at about 2000; they then dug in to await reinforcements and resume the attack in the morning.<sup>128</sup>

It was at this point that the German countermeasures began to have an effect on the American operation. The main German headquarters on this section of the front was Wehrkreis Kommando

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<sup>125</sup> Gavin, *On to Berlin*, pp. 147-48; Russell A. Hart, “Mission Impossible? The Mobilization of the German Replacement Army and its Role in the Thwarting of Operation Market Garden,” in *Operation Market Garden: The Campaign for the Low Countries, Autumn 1944: Seventy Years On*, Eds. John Buckley and Peter Preston-Hough (Solihull: Helion & Company, 2016), p. 111.

<sup>126</sup> WO 171/366 *War Diary HQ 1<sup>st</sup> Airborne Corps – Operation Market Operation Instruction No. 1*, p. 2; Gavin, *On to Berlin*, p. 149; LoFaro, *The Sword of St. Michael*, pp. 292-93; Powell, *The Devil's Birthday*, pp. 75-77.

<sup>127</sup> Gavin, *On to Berlin*, pp. 150-51; Powell, *The Devil's Birthday*, p. 77.

<sup>128</sup> CAB 106/1056 82<sup>nd</sup> Airborne Division - Operation Market Historical Data, p. 4; LoFaro, *The Sword of St. Michael*, p. 331.

(Military District Command) VI. This was an improvised field headquarters formed from the former administrative HQ of the 6<sup>th</sup> Military District, encompassing the Westphalia and Rhineland regions, which had operated as part of the German *Ersatzheer* (Replacement Army). The *Ersatzheer* was responsible for recruiting and training replacement troops within Germany for various associated divisions of the *Feldheer* (Field Army), as well as for general internal security and home defence duties.<sup>129</sup> In early September, as the front approached the district's western borders, Wehrkreis VI's administrative headquarters was converted into a de facto field army headquarters and ordered to send its units to occupy and begin repairing and improving the neglected Westwall defences as the tattered remnants of the *Westheer* streamed home from France.<sup>130</sup> To this end, the newly established Wehrkreis Kommando VI in turn established a corps headquarters, Korps Feldt, to manage its field operations, under General Karl Feldt, a cavalry officer deemed too old for front line service. On September 12<sup>th</sup>, Korps Feldt was deployed to take over the section of the Westwall defences that lay within the Reichswald with a single division under command, the 406<sup>th</sup> "Special Administrative Division," which had previously administered training, home guard, and POW camp guard units within the district.<sup>131</sup> By the 17<sup>th</sup>, this division included nine understrength battalions of troops, mostly training units, home guards, or march battalions assembled from various *Westheer* stragglers and convalescents, for a total of 6,669 men fit for duty, most with only minimal weaponry and half an issue of ammunition.<sup>132</sup>

In spite of its limited strength and resources, Korps Feldt proved, like the II SS Panzer Korps, to be fortuitously positioned to oppose the Allied landings. Also, like the SS to the north, its forces began to

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<sup>129</sup> Ernst F. Faeckenstadt, *The Activities of the Western Wehrkreis/commandos (military area headquarters) VI and XII and their cooperation with the front in the defensive combat of OB West from September 1944 to March 1945* MS # B-665 (Allendorf: US Army Historical Division, Foreign military Studies Collection, 1947), p. 2; WO 171/376 *War Diary HQ Guards Armoured Division, Intelligence Summary No. 64, Appendix A, Part II: "The Structure of the German Replacement System."*

<sup>130</sup> Franz Mattenklott, *Rhineland, Part 3: 15 Sept 44-21 March 45*. MS # B-044 (Königstein: US Army Historical Division, Foreign military Studies Collection, 1950), p. 5; Faeckenstadt, *The Activities of the Western Wehrkreis/commandos*, pp. 21-22.

<sup>131</sup> Hellmuth Reinhardt, *The Commitment of the 406<sup>th</sup> Division against the Allied Air Landing at Nijmegen in September 1944*. MS # C-085 (Königstein: US Army Historical Division, Foreign military Studies Collection, 1950), pp. 6, 8, 15-16; Mattenklott, *Rhineland, Part 3*, p. 6.

<sup>132</sup> Reinhardt, *The 406<sup>th</sup> Division*, p. 8, 16; BA/MA RH 19 IV/56 *Unterrichtung Chef Wehrkreis VI über Maßnahmen des Wehrkreises*, 18<sup>th</sup> September 1944; Hart, "Mission Impossible," p. 113.

mobilize as soon as the landings were spotted, even before any official orders were issued. Having been warned of the landings by some of its advance outposts in Nijmegen at 1410, the 406<sup>th</sup> Division's HQ issued its initial warning order to its subunits at 1430, ensuring that they were already in motion when Model's first orders came in at 1530 (later followed by the more detailed instructions issued across the entire army group), ordering Korps Feldt to attack and secure Nijmegen.<sup>133</sup>

Some of the corps' advance elements were rapidly overrun on the Groesbeek Heights, but three companies in Nijmegen, under the command of a Luftwaffe Colonel Henke, immediately set to work establishing defences around the bridges; it was these units, along with a handful of SS troops sent down as an advance guard from Arnhem, that repulsed the initial effort by the 508<sup>th</sup> PIR to capture the bridges on the evening of the 17<sup>th</sup>.<sup>134</sup> With the main body of his troops in the Reichswald, General Feldt quickly realized that his troops lacked the numbers or training needed to pose a serious threat to the American divisions, with their strong contingents of veteran troops, but also realized that he would need to buy time for reinforcements to arrive. In light of these factors, he decided that the best solution was to "bluff" the Allied troops into a more cautious stance, acting as aggressively as possible so as to give a misleading impression of strength.<sup>135</sup> As Feldt later testified: "I had no confidence in this attack, since it was almost an impossible task for 406 Division to attack picked troops with its motley crowd. But it was necessary to risk the attack in order to forestall an enemy advance to the east, and to deceive him in regard to our strength."<sup>136</sup>

As such, though he had only about 2,000 men on hand and ready for action at the time, Feldt initiated a full scale counterattack on the 82<sup>nd</sup> Airborne Division's airhead at 0600 on the 18<sup>th</sup>, with a further 1,000 or so troops joining in through the course of the morning.<sup>137</sup> Feldt was soon shocked to find his units making rapid progress, as the 82<sup>nd</sup> Division had such a lengthy perimeter to defend that their

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<sup>133</sup> BA/MA RH 19 IX/5, *Fernschreiben von Oberkommando der Heeresgruppe B la an Wehrkreis-Kommando VI*, 2315, 17<sup>th</sup> September; Hart, "Mission Impossible," p. 114.

<sup>134</sup> Kershaw, *"It Never Snows in September,"* pp. 99-101.

<sup>135</sup> Reinhardt, *The 406<sup>th</sup> Division*, pp. 16-17.

<sup>136</sup> Kershaw, *"It Never Snows in September,"* p. 120.

<sup>137</sup> Kershaw, *"It Never Snows in September,"* pp. 121-22; Hart, "Mission Impossible," pp. 118-19; Reynolds, *Sons of the Reich*, p. 134.

forces were mostly divided into isolated platoon outposts at major villages and road junctions, most of which staged a fighting retreat back towards their landing zones in the face of Feldt's attack. Several outposts were cut off and surrounded, however, and Feldt's troops also overran some of the American landing zones and even seemed poised to assault the Groesbeek Heights for a time. In light of this threat, Gavin was forced to recall the 508<sup>th</sup> PIR's 3<sup>rd</sup> Battalion from Nijmegen, where it was moving to reinforce the 1<sup>st</sup> Battalion fighting at the bridge approaches, in order to retake the lost landing zones for the second lift and stabilize the line. However, though the attack threw the 82<sup>nd</sup> - which had not anticipated such a large scale counterattack so soon into the operation - badly off balance, the veteran paratroops recovered quickly, brought Feldt's attack to a halt by about 1030, and then counterattacked, sending the German troops fleeing back to the Reichswald just as the second lift landed in the early afternoon.<sup>138</sup> With this, the 406<sup>th</sup> Division's already limited combat power was essentially spent, with it having suffered about 50 dead, 400 wounded and over 100 POWs in the course of the attack, and it was unable to resume its attacks on the 19<sup>th</sup>.<sup>139</sup>

The efforts of the 406<sup>th</sup> Division, however, had not been in vain, as they imposed a fatal delay in the 82<sup>nd</sup>'s push to secure the Nijmegen bridges. The efforts of Kampfgruppe Frundsberg to get its forces through to reinforce and secure Nijmegen as Bittrich had ordered had been severely hindered by Lt. Col. Frost's capture of the Arnhem road bridge, as it required them to improvise a painfully slow ferry service to get their troops across the Rhine at Pannerden, southeast of Arnhem.<sup>140</sup> However, because Korps Feldt's attack prevented the 82<sup>nd</sup> from dispatching a force strong enough to capture the bridges from Henke's small band of security troops through the whole of the 17<sup>th</sup> and 18<sup>th</sup>, KG Frundsberg was eventually able to get enough troops through to decisively secure Henke's perimeter, with at least 500 more infantrymen, along with several tanks and self-propelled guns, being in position at the German bridgehead by the

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<sup>138</sup> Gavin, *On to Berlin*, p. 165; CAB 106/1056 82<sup>nd</sup> Airborne Division - Operation Market Historical Data, p. 5; Reinhardt, *The 406<sup>th</sup> Division*, p. 18.

<sup>139</sup> Harclerode, *Arnhem: A Tragedy of Errors*, p. 103; LoFaro, *The Sword of St. Michael*, p. 340; Hart, "Mission Impossible," p. 121.

<sup>140</sup> BA/MA RS 2-2/32 Zusammengefaßter Bericht des II. SS-Pz. Korps über die Kämpfe in Raume Arnheim, mit 3 Kartenskizzen, 10.9 – 15.10 1944, p.5; Kershaw, *"It Never Snows in September,"* pp. 139-41.

morning of the 19<sup>th</sup>. Though still relatively small, this force was able to take advantage of the extensive Dutch pre-war fortifications around the Nijmegen bridges to establish a defence that would require a further two days of set-piece attacks by the 82<sup>nd</sup> and the arriving Guards Armoured Division to overcome.<sup>141</sup>

Thus, although their attacks proved essentially hopeless and quite costly at the tactical level, the very fact that Wehrkreis Kommando VI and its subordinate units were able to assemble, mobilize, and dispatch their forces into battle so quickly, and with such aggression, inflicted a significant operational setback on the otherwise successful 82<sup>nd</sup> Division, throwing it onto the defensive for a critical period that prevented it from securing a critical objective while it was still vulnerable to capture by their relatively lightly armed forces, a failure that set Market Garden's strict timetable back by nearly 48 hrs. Though the Allied forces recognized the generally low quality of Korps Feldt's troops, the threat that they represented simply could not be ignored.

Moreover, the remnants of the 406<sup>th</sup> Division were soon joined by reinforcements from II Parachute Corps – a similarly improvised force of Fallschirmjäger (Paratrooper) Regiments formed around cadres of survivors from the Western Front and bulked out with fresh recruits, and together they kept up a series of attacks on the 82<sup>nd</sup> Division's right flank for the next few days.<sup>142</sup> These ongoing attacks, which at times put serious pressure on the 82<sup>nd</sup> Division and even threatened to retake some of the vital bridges, ensured that not only was the 82<sup>nd</sup> unable to spare any forces to support the advance towards Arnhem, but that the Guards Armoured Division was even forced to dispatch its Coldstream Guards

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<sup>141</sup> Kershaw, *"It Never Snows in September,"* pp. 40-41; CAB 106/1054 *A Short History of 30 Corps in the European Campaign 1944-1945*, p. 33; CAB 106/1056 *82<sup>nd</sup> Airborne Division - Operation Market Historical Data*, p. 6; WO 171/341 *War Diary HQ 30 Corps, Intelligence Summary No. 504*, 2359, 20<sup>th</sup> September 1944; WO 171/376 *War Diary HQ Guards Armoured Division, Intelligence Summary No. 71*, 19<sup>th</sup> September 1944; WO 171/638 *War Diary HQ 32<sup>nd</sup> Guards Brigade, Brigade Intelligence Summaries, starting from 1<sup>st</sup> Sept 1944: No. 47*, 21<sup>st</sup> September 1944; Powell, *The Devil's Birthday*, pp. 131-33.

<sup>142</sup> Ernst Blauensteiner, *Employment of the II Fallschirm Korps Between the Maas and Rhine Rivers, 19 September 1944 to 10 March 1945*. MS # B-262 (Allendorf: US Army Historical Division, Foreign military Studies Collection, 1946), pp. 1-2; Eugen Meindl, *II FS Corps, part III: Rheinland (15 Sep 44 to 21 Mar 45)* MS # B-093 (Königstein: US Army Historical Division, Foreign military Studies Collection, 1950), pp. 1-5; Reinhardt, *The 406<sup>th</sup> Division*, pp. 10, 18.

Group to support the 82<sup>nd</sup> along the Reichswald front.<sup>143</sup> This force, which comprised a battalion of infantry and a regiment of tanks, represented fully a quarter of the Guards Division's offensive strength, strength that was thus denied to the main advance towards Arnhem.

The Reichswald area remained a source of considerable anxiety for the Allied leadership throughout the rest of the operation as, even after the threat had been largely contained, they feared that the German attacks to date only presaged the arrival of larger forces from the German interior, ensuring that they kept sizeable forces in the area to contain any potential attack.<sup>144</sup> Thus, while the German effort to hold, and later retake the Nijmegen bridges failed, the aggressive posture of the German defenders in the area succeeded in diverting a significant proportion of the Allies' offensive strength into defensive actions along the extended flank of the corridor, drawing away the initiative and ensuring that, even after the capture of the Nijmegen bridges, the Allied spearheads remained too weak to punch through the hastily established German defences on the "Island" north of the Waal in time to relieve the 1<sup>st</sup> Airborne Division.

The American 101<sup>st</sup> Division, which dropped south of the 82<sup>nd</sup> around the city of Eindhoven, faced a very different reception to that which greeted their northern neighbors, but one that still bore some of the same key characteristics. Much like the 82<sup>nd</sup>, the 101<sup>st</sup> Division faced only minimal resistance to their initial landings, with only the loss of the bridge at Son to an alert German demolition party marring the successful achievement of their primary objectives.<sup>145</sup> With the attentions of the 1<sup>st</sup> Fallschirmarmee split between the landings and XXX Corps' assault out of the Neerpelt bridgehead, the 101<sup>st</sup>'s sector remained relatively quiet over the next three days, apart from the capture of Eindhoven from a small

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<sup>143</sup> WO 205/871 *A Graphic History of the 82<sup>nd</sup> Airborne Division: Operation "Market," Holland 1944, Map Plate # 2: D+2 through D+4 (19<sup>th</sup> through 21<sup>st</sup> Sept)*; WO 171/366 *War Diary 1<sup>st</sup> Airborne Corps HQ, 82<sup>nd</sup> Airborne G-3 Periodic Report, 21<sup>st</sup> September 1944*, p.1; CAB 106/1056 *82<sup>nd</sup> Airborne Division - Operation Market Historical Data*, pp. 6-8; WO 171/1250 *War Diary 1<sup>st</sup> (Armoured) Battalion Coldstream Guards, 20<sup>th</sup> to 21<sup>st</sup> September 1944*; WO 171/1252 *War Diary 5<sup>th</sup> Battalion Coldstream Guards, 20<sup>th</sup> to 21<sup>st</sup> September 1944*.

<sup>144</sup> WO 171/341 *War Diary HQ 30 Corps Intelligence Summary No. 504, 2359, 20<sup>th</sup> September 1944*, p. 2; WO 171/341 *War Diary HQ 30 Corps Intelligence Summary No. 505, 21<sup>st</sup> September 1944*, p. 1-2; WO 171/341 *War Diary HQ 30 Corps Intelligence Summary No. 507, 2359, 24<sup>th</sup> September 1944*; WO 171/366 *War Diary 1<sup>st</sup> Airborne Corps HQ, Intelligence Summary No. 7, 24<sup>th</sup> September 1944*.

<sup>145</sup> Maxwell Taylor, *Swords and Plowshares* (New York: W.W. Norton & Company, 1972), p. 88; WO 205/871 *Report of Airborne Phase (17-27 Sept., 44) Operation "Market" 101<sup>st</sup> Division, 12<sup>th</sup> October 1944*, p. 1-2;

German force early on the 18<sup>th</sup> and a minor skirmish to secure a secondary bridge at the town of Best that soon ballooned into a major battle as both sides continued to feed in reinforcements, even though the bridge was blown on the afternoon of the 18<sup>th</sup>.<sup>146</sup> Though the 101<sup>st</sup> eventually captured the town early on the 19<sup>th</sup>, with the fight having drawn in the better part of a full regiment of American troops and a squadron of British tanks, with the bridge gone, their victory gained little more than the 1,056 POWs they took, and the 300 or so German bodies found in the town.<sup>147</sup>

Instead, the main German defensive effort in this sector began from the 21<sup>st</sup>, when Field Marshal Model, making one the few significant alterations of the battle to his original operational orders, called for a coordinated effort by the various German formations left scattered through the area by the Allied assaults to sever, or at least disrupt traffic on, the Allied lines of communication leading back along the main road to their bridgehead at Neerpelt, an effort which, it was hoped, would severely impede the 2<sup>nd</sup> Army's push towards the 1<sup>st</sup> Airborne Division's toehold across the Lower Rhine, allowing the forces of the II SS Panzer Korps to finally contain it. To this end, German forces on both sides of the narrow Allied corridor were ordered to focus their efforts around the town of Veghel, about halfway along the road between Eindhoven and Nijmegen.<sup>148</sup> This order served to continue and consolidate local counterattack efforts that had been taking place on a smaller scale since the 19<sup>th</sup>.<sup>149</sup> The 107<sup>th</sup> Panzer Brigade, for example, which had been redirected while en route to the battle at Aachen in light of the Allied landings, and which, with its Panzer battalion mustering 40 brand new Panther tanks, was the only armoured formation of any notable strength to take part in the early stages of the battle, had made rather tentative

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<sup>146</sup> WO 171/366 *War Diary HQ 1<sup>st</sup> Airborne Corps, 101<sup>st</sup> Airborne Division G-3 Periodic Report*, 20<sup>th</sup> September; WO 205/873 *Report on Operations "Market" and "Garden," September to October 1944*, p. 8; Donald R. Burgett, *The Road to Arnhem: A Screaming Eagle in Holland* (Novato, CA: Presidio Press, 1999), pp. 77-78; Harclerode, *Arnhem: A Tragedy of Errors*, p. 99.

<sup>147</sup> WO 205/873 *Report on Operations "Market" and "Garden," September to October 1944*, p. 9; Harclerode, *Arnhem: A Tragedy of Errors*, p. 99; Burgett, *The Road to Arnhem*, p. 77.

<sup>148</sup> BA/MA RH 19 IX/5 *Fernschrieben von Oberkommando der Heeresgruppe B, Ia an Fallschirm AOK 1, Luftflotte 3, AOK 15, WB Ndl, AOK 7, Wehrkreis-Kommando VI*, 21<sup>st</sup> September 1944, p. 1-2.

<sup>149</sup> BA/MA RH 19 IV/56 *OB West Tagesmeldung*, 20<sup>th</sup> September 1944, p. 1-3; BA/MA RH 19 IV/56 *OB West Tagesmeldung*, 19<sup>th</sup> September 1944, p. 2.

probing attacks on the newly built Bailey bridge at Son on the evening of the 19<sup>th</sup> and morning of the 20<sup>th</sup>, being sharply repulsed both times by American paratroops and British tanks.<sup>150</sup>

Model's order on the 21<sup>st</sup> touched off a prolonged series of attacks by German forces all along the main road in the 101<sup>st</sup>'s sector, and particularly in the area around Veghel and St. Oedenrode. Major-General Maxwell Taylor, who kept his units operating in relatively small mobile task forces to rapidly counterattack any developing crisis points, compared the operations of his division to those of the 19<sup>th</sup> Century US Cavalry, defending rail lines through "Indian Country" against attacks by small groups of raiders coming from all directions; for their part, the troops of the 101<sup>st</sup> soon dubbed this hotly contested stretch of road "Hell's Highway."<sup>151</sup> Despite the best efforts of Taylor and his men, the sheer quantity and overall volume of German attacks badly overextended their limited forces, as they had only so many "fire brigades" to meet the German thrusts, meaning that countering any given attack meant opening up a gap to be exploited elsewhere. General von Zangen of the 15<sup>th</sup> Army, whose advance units, having recently escaped from the Dutch coast across the Scheldt Estuary, joined in this phase of the battle, noted his surprise at that ease with which his weak forces were able to penetrate the lines held by the elite paratroopers and at the apparent lack of attention the Allies were giving to the defence of their lines of communication, not realizing the scale of the task that was before the 101<sup>st</sup>, effectively surrounded by highly active and aggressive opponents.<sup>152</sup>

It must be noted that the well-trained and experienced troops of the 101<sup>st</sup> Airborne Division generally outclassed the mostly second line German troops they faced, and frequently inflicted heavy and lopsided losses upon those they engaged. On the 20<sup>th</sup>, for example, a battalion of the 506<sup>th</sup> Parachute Infantry Regiment engaged a battalion of German parachute trainees near Veghel with the support of a few tanks from the 44<sup>th</sup> Royal Tank Regiment, and quickly drove them off, inflicting about 40 dead and

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<sup>150</sup> Taylor, *Swords And Plowshares*, p. 91; BA/MA RH 19 IV/56 *OB West Morgenmeldung vom 20.9.44*, p. 1-2; WO 171/341 *War Diary HQ 30 Corps*, September 20<sup>th</sup> 1944; WO 205/1126 *21 Army Group – Operation "Market Garden" – 17-26 September 1944*, p. 45, 48.

<sup>151</sup> Taylor, *Swords and Plowshares*, p. 91; Burgett, *The Road to Arnhem*, p. 89.

<sup>152</sup> Von Zangen, *Battles of the 15<sup>th</sup> Army*, pp. 18-19.

40 wounded, and taking 418 POWs, while losing only four of their own dead and six wounded.<sup>153</sup> The constant stream of attacks from all directions eventually paid off for the Germans though, when a further attack on the 22<sup>nd</sup> by the 107<sup>th</sup> Panzer Brigade, now operating as part of Kampfgruppe Walther, with support from elements of Kampfgruppe Huber of the 59<sup>th</sup> Division, attacking from the other side of the corridor, managed to find a weak point in the 101<sup>st</sup>'s lines and establish a blocking force astride the road just north of Veghel.<sup>154</sup> This cut to XXX Corps' vital lines of supply and communication forced the Allies to muster a considerable force to clear them. The Guards Armoured Division was thus ordered to dispatch its 32<sup>nd</sup> Guards Brigade, comprising the Grenadier and Coldstream Regimental Groups (with a battalion each of tanks and infantry), along with a sizeable supporting contingent of XXX Corps' reserve artillery, to go to the 101<sup>st</sup>'s aid, further depleting the strength of the corps' push towards Arnhem.<sup>155</sup> This brigade, alongside six battalions drawn from three of the 101<sup>st</sup>'s infantry regiments, managed to reopen the corridor, but it took over 24 hours to do so, ensuring XXX Corps supplies, particularly of vital artillery ammunition, were left restricted at a critical juncture in their operations to reach Arnhem. This meant that the artillery support available to both the 43<sup>rd</sup> Infantry Division's attacks on the Island and the 1<sup>st</sup> Airborne Division's defence of the Oosterbeek perimeter was severely limited; the vital fire support provided to the trapped 1<sup>st</sup> Division, in particular, was limited by order of XXX Corps' artillery commander to between 20 and 40 rounds per gun per day throughout the period that the road was blocked. It was such reasons that led General Horrocks to dub the day the "Black 22<sup>nd</sup>".<sup>156</sup>

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<sup>153</sup> Powell, *The Devil's Birthday*, p. 154.

<sup>154</sup> WO 171/341 *War Diary HQ 30 Corps*, 22<sup>nd</sup> September 1944; WO 205/873 *Report on Operations "Market" and "Garden," September to October 1944*, p. 14; Walter Poppe, *2<sup>nd</sup> Commitment of the 59<sup>th</sup> Infantry Division in Holland; 18 September – 25 November 44*. MS # B-149 (Allendorf: US Army Historical Division, Foreign military Studies Collection, 1946), pp. 5-6; WO 171/341 *War Diary HQ 30 Corps Intelligence Summary No. 506*, 2359, 22<sup>nd</sup> September 1944; Harclerode, *Arnhem: A Tragedy of Errors*, pp. 138-39; Reynolds, *Sons of the Reich*, pp. 163-64.

<sup>155</sup> CAB 106/1054 *A Short History of 30 Corps in the European Campaign 1944-1945*, p. 37; WO 171/638 *War Diary HQ 32<sup>nd</sup> Guards Brigade*, 22<sup>nd</sup> to 23<sup>rd</sup> September 1944.

<sup>156</sup> CAB 106/1054 *A Short History of 30 Corps in the European Campaign 1944-1945*, p. 37; WO 171/1252 *War Diary 5<sup>th</sup> Battalion Coldstream Guards*, 22<sup>nd</sup> to 23<sup>rd</sup> September 1944; WO 171/1253 *War Diary 1<sup>st</sup> (Motor) Battalion Grenadier Guards*, 22<sup>nd</sup> to 23<sup>rd</sup> September 1944; WO 205/873 *Report on Operations "Market" and "Garden," September to October 1944*, p. 15; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division, Annexure R: Report by CRA 1 Airborne Division on Operation Market, Appendix C to Part 1: 30 Corps Artillery Support*, p. 3; Horrocks, *A Full Life*, p. 126.

Moreover, despite the heavy losses their forces suffered in both the attacks on the corridor and the Allied clearing operations, the German pressure on Hell's Highway continued. On the 24<sup>th</sup>, elements of Kampfgruppe Chill and the Jungwirth Parachute Battalion of the 1<sup>st</sup> Fallschirmarmee again found a weak point in the Allied lines after several probing attacks and, joined by several other small units, cut the road near Koevering, destroying a British supply convoy in the process. This small blocking force clung to the road for nearly two full days in the face of attacks by elements of all four of the 101<sup>st</sup> Division's infantry regiments with British tank support, and left a large number of mines scattered across the road when they finally retreated early on the 26<sup>th</sup>, as the 1<sup>st</sup> Airborne Division was evacuating across the Lower Rhine.<sup>157</sup>

Though most of the German units involved in these attacks were eventually shattered by the superior Allied infantry and armoured forces brought to bear against them, their efforts clearly had a strong cumulative effect on the overall strength and drive of the Allied thrust to Arnhem. It is worth noting that, given the relatively weak nature of the German forces in the Eindhoven sector, and the abysmal state of communications, both between the various forces, and to higher headquarters, that the Germans could not reasonably have expected any better performance from them. Though these weak, locally controlled, and poorly coordinated attacks never managed to develop the mass of fighting power that might have decisively cut off and trapped the Allied forces to the north, they still exercised a considerable influence upon the battle and contributed to the German victory; the willingness, even eagerness, of the assorted units operating under the 1<sup>st</sup> Fallschirmarmee to attack, largely on their own initiative and plans, and with little hope of notable success against heavy odds, was vital to the impact they had. Had these forces conducted themselves more passively, either defending in place or even making entirely understandable retreats in the face of the superior Allied forces, the Allies would have been able to muster considerably more fighting power at the spearhead of their advance, as they could have held their lines of communication with only limited contingents of security troops, rather than the

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<sup>157</sup> Friedrich August von der Heydte, *6<sup>th</sup> Fallschirm Jaeger Regiment in Action against US Paratroopers in the Netherlands in September 1944*. MS # C-001 (US Army Historical Division, Foreign military Studies Collection), p. 8; Von Zangen, *Battles of the 15<sup>th</sup> Army*, pp. 21-22; Poppe, *The 59<sup>th</sup> Infantry Division in Holland*, pp. 7-8; WO 171/341 *War Diary HQ 30 Corps Intelligence Summary No. 507*, 2359, 24<sup>th</sup> September 1944; WO 171/1252 *War Diary 5<sup>th</sup> Battalion Coldstream Guards*, 24<sup>th</sup> to 26<sup>th</sup> September 1944; Burgett, *The Road to Arnhem*, pp. 89-90.

full strength of two airborne divisions and a considerable contingent from XXX Corps. As it was, Allied security along Hell's Highway proved barely able to keep XXX Corps from being entirely cut off from their own lines. It is worth noting that while as late as the 21<sup>st</sup>, the Allied leadership regarded the threat to their lines of communications as "not serious", by the 23<sup>rd</sup>, General Miles Dempsey of the 2<sup>nd</sup> Army officially designated the mission of protecting these lines, and the bridgehead at Nijmegen, as the Army's top priorities, relegating the initial offensive mission towards Arnhem to a distant third.<sup>158</sup> The German attacks on the corridor thus effectively seized the initiative from the Allies, forcing them ever more onto the defensive and onto seeking to avoid a catastrophic defeat, rather than attaining their original objectives.

Overall, across the entire breadth of the Market Garden landings, the nature of the German response, characterized by rapid and aggressive reactions by units operating largely on their own initiative, with only minimal central direction, was a vital determining factor in the eventual defeat of the operation. Right from the very start, in spite of the considerable surprise their airborne landings achieved, the Allies found themselves losing, or struggling to retain, the overall initiative in the battle, as German units reacted faster than they could put their own plans into effect. Montgomery's plans for Market-Garden had been predicated around an expectation that the shock effect of the massed airborne landings – the largest in history to this day – would produce an effective "window" of 24-48 hours in which the Germans would be unable to effectively react, allowing the Allies to secure their objective crossings and thrust across the Rhine; instead, the Germans reacted effectively within a mere handful of hours, throwing the Allied plans into total disarray from the outset.<sup>159</sup> After action reports by the II SS Panzer Korps, in particular, heavily emphasized the role that the near universal application of swift aggressive action by whatever commanders happened to be on the spot played in foiling the Allied operation.<sup>160</sup> This author would argue that these actions were less the product of any specific decisions made at the time, than they

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<sup>158</sup> WO 205/1126 21 Army Group – Operation "Market Garden" – 17-26 September 1944, p. 53; WO 171/366 War Diary 1<sup>st</sup> Airborne Corps HQ, Appendix L: Message from 2<sup>nd</sup> Army TAC HQ to 30 Corps and Airborne Corps, 2020, 23<sup>rd</sup> September 1944.

<sup>159</sup> WO 205/873 Report on Operations "Market" and "Garden," September to October 1944, p. 20.

<sup>160</sup> BA/MA RS 2-2/34 Reg. Tgb. Nr. 917/44, Generalkommando II SS Pz Korps, Ic, 4 October 1944, pp. 4-5.

were of the fact that German forces had been taught, trained, and were well-versed in acting this way since not merely the days of Hans von Seeckt, but those of the Great Elector and Frederick the Great. The German victory in Holland in September 1944 was perhaps the last successful product of a long tradition of German doctrine and military thought.

## CHAPTER 4: THE ORIGINS AND NATURE OF BRITISH TACTICAL AND COMMAND DOCTRINE AND ITS ROLE IN OPERATION GARDEN

In direct contrast to German doctrine, the combat doctrine employed by British forces in late 1944 proved to be generally ill-suited to the circumstances of Operation Market Garden. In this period British (and to a lesser extent American) doctrine centred around the concept of the “methodical battle,” in which commanders relied upon detailed and often rigid planning and control, set timetables, limited objectives and carefully organized support from artillery and air power in order to effectively conduct their battles. When Market Garden was being planned, this doctrine had just proven its general effectiveness in the hands of Field Marshal Bernard Montgomery and his 21<sup>st</sup> Army Group in Normandy. In Normandy, the Germans, despite generally holding a fair degree of tactical superiority over their less well trained and experienced Allied opponents, were drawn into an intense battle of attrition in the face of a massive Allied superiority in firepower, under the cover of which the Allies made gradual and careful progress. Though this methodical approach took a considerable amount of time and brought about very heavy losses on both sides, it was the Germans who gave out first under the pressure.<sup>161</sup>

In Operation Market Garden, however, Montgomery willingly, and rather carelessly, stepped well outside the “comfort zone” of his forces’ war fighting capabilities, seeking to use shock and rapid maneuver to overcome German resistance rather than the traditional firepower and a slow, carefully managed set-piece advance. It is worth noting that several observers on both sides, such as American General Omar Bradley, Generalfeldmarschall Gerd von Rundstedt, and even General Urquhart, expressed shock at the degree to which Market Garden departed from Montgomery’s standard combat methods and practices.<sup>162</sup> Overall, the British forces did not really possess the doctrine, training, or experience that would have allowed them to execute Market Garden to full effect; in fact the Market Garden plan would have required the British to operate rather like Germans to achieve the hoped for level of success. The operation demanded that all units involved act as boldly as possible to maximize the initial shock effect of

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<sup>161</sup> Stephen Ashley Hart, *Montgomery and “Colossal Cracks”: The 21<sup>st</sup> Army Group in Northwest Europe, 1944-45* (Westport, CT: Praeger Publishers, 2000), pp. 1-2, 9-10.

<sup>162</sup> Ryan, *A Bridge Too Far*, pp. 87-88, 246; Urquhart, *Arnhem*, p. 1.

the landings, seizing objectives and overcoming any resistance faced quickly and efficiently, with limited support. Given that the airborne units would be widely separated from their commanders, and at times, from each other, and that their communications equipment and procedures were known to be less than reliable, it would also demand a maximum level of individual initiative be exercised by every unit commander right down to the lowest tactical level. Such a bold plan could naturally expect to encounter unexpected situations and setbacks, requiring commanders to adapt and improvise their plans as things progressed. While the plans for Market Garden to some degree recognized these requirements, heavily emphasizing the need for all participating units to act as quickly and boldly as they could, it is one thing to simply order military units to operate in a certain way and entirely another for them to actually be capable of doing so.

In the event, the British units involved in Operation Market Garden largely failed to live up to the lofty expectations that Montgomery placed upon them with so little justification. The intended quick rapier-like thrust by XXX Corps to Arnhem and across the Lower Rhine, in particular, proved to be more of a ponderous series of hammer blows, with the corps advancing slowly and cautiously and frequently halting for prolonged periods to deal with even limited resistance; the advance fell well behind schedule on the first day, and the gap between intentions and reality grew steadily thereafter. Though the operational plan called for XXX Corps to reach Arnhem inside of three days, it was still struggling to reach the southern banks of the Lower Rhine when the 1<sup>st</sup> Airborne Division was evacuated – a full nine days after the operation began. XXX Corps' failure has been widely criticized in the literature surrounding the campaign, by both historians and participants, often being attributed to an inadequate sense of urgency on the part of corps commander Lieutenant-General Brian Horrocks and his troops.<sup>163</sup> In truth, XXX Corps' troops generally conducted themselves in full accordance with how they had been trained, and with how they had operated to date: slowly and cautiously, with limited objectives, and a methodical "step-by-step" execution of detailed plans. Thus, XXX Corps can hardly be faulted for its

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<sup>163</sup> Lewis H. Brereton, *The Brereton Diaries: The War in the Air in the Pacific, Middle East and Europe, 3 October 1941 – 8 May 1945* (New York: Da Capo Press, 1976), p. 360; Urquhart, *Arnhem*, pp. 119, 203-4; Middlebrook, *Arnhem 1944*, p. 444; Powell, *The Devil's Birthday*, pp. 87, 239-40.

relative slowness during the campaign; it was largely the fault of Montgomery and the other Market Garden planners for presenting them with a plan that was predicated upon them operating in a manner entirely contrary to their established doctrine.

Like the Germans, or any other nation for that matter, British combat doctrine was shaped by their own philosophy of warfare, the way that their military leadership had historically perceived and understood the nature of combat and how best to deal with its demands. Unlike the Germans, however, the British establishment never accepted the idea that war was inherently and unavoidably chaotic. Drawing upon the Enlightenment conception that proper scientific analysis could allow mankind to understand and thus control the natural world, as well as the ideas of the 19<sup>th</sup> Century Swiss military philosopher Henri Jomini, British military thought believed that these concepts could be extended to the realm of human activities such as war; that it was possible to identify, understand, and mitigate the various factors that created Clausewitzian friction in combat and reduce them to a manageable level.<sup>164</sup> Thus, in contrast to the Germans, who believed that chaos was an unavoidable and inherent factor in war, the British establishment believed that it was possible to make war “orderly,” that human ingenuity, willpower, and technological aids could bring various random factors under a degree of control and reduce the effects of friction to a minimum.<sup>165</sup>

As such, the effort to establish and maintain control over the battlefield was a central component of British doctrine in the late 19<sup>th</sup> and early 20<sup>th</sup> centuries. This doctrine called for strict centralized planning and management of battles, for commanders to lay down plans in advance and in as much detail as possible, dictating the objectives of their subordinate units and the direction, speed, and timing of their movements. Senior commanders – who were seen as the only ones who would possess a full and proper overview and understanding of the overall situation, and thus the ability to make fully informed decisions – were to endeavor to extend their control over as many aspects of the battle as possible.<sup>166</sup> Ideally, as

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<sup>164</sup> David French, “Doctrine and Organization in the British Army, 1919-1932,” *The Historical Journal* 44, No. 2 (2001), p. 502; French, *Raising Churchill’s Army*, pp. 16-17; Murray, *German Military Effectiveness*, pp. 212-13.

<sup>165</sup> Samuels, *Command or Control?*, p. 2; French, “Doctrine and Organization in the British Army,” p. 504.

<sup>166</sup> French, “Doctrine and Organization in the British Army,” p. 505.

circumstances as the front changed during the course of a battle, individual units would report the new situation back to the central commander, who would thus be able to adjust the plan and issue new orders as needed. In reality, the British soon became fully aware, especially through the course of the First World War, that the expanding scope and level of unit dispersion on the modern battlefield, and the limitations of contemporary means of communication between senior commanders and their units, meant that this level of fine control was an as yet unachievable ideal. Unlike the Germans, however, who sought to solve this problem through the devolution of authority to junior leaders – effectively preparing their army to operate with only a bare minimum of central control, if necessary – the British instead sought to maintain that control through a policy of rigid adherence to central battle plans. In the absence of direct instructions to the contrary, units were simply to carry out their set role within the plan by rote, which would minimize any weaknesses of command and control in combat by allowing a commander to lay down plans in advance, reducing the need for back and forth communications between central commanders and units as the battle progressed. These subordinate units were to keep to these plans at all costs; any alterations to their actions in the face of unexpected situations would simply disjoint the overall plan, creating the confusion and chaos this doctrine sought to avoid. The maintenance of unified action was seen as vital, and to maintain this unified effort, it was believed that a full degree of initiative could only be exercised by the senior commander.

To this end, the core element of British military doctrine and training in this period was the value of discipline, which would provide junior officers and men with the willpower and self-control necessary to stick to plans even in the face of setbacks and casualties; it was widely believed by the British military establishment that an opponent could simply be forced to conform to any plan, if that plan was pressed forward with sufficient determination and will.<sup>167</sup> Thus, the most important role for doctrine and training was to foster a strict and reflexive obedience to orders given, even when such obedience might bring considerable personal risk; junior officers and men were expected to trust that their commander knew

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<sup>167</sup> Samuels, *Command or Control?*, pp. 118-19; French, “Doctrine and Organization in the British Army,” p. 504.

what was best for the overall situation, and simply play the roles that he assigned them, whatever the cost.<sup>168</sup>

The peak of this doctrine of centralized control came in the First World War. Like those of most of the other combatants, the British Army's early efforts at traditional maneuver warfare in the opening months of the conflict proved to be costly failures in the face of modern firepower, mass armies, and entrenchments. By 1916, the British Army was increasingly turning away from simple infantry assaults and instead elevating the artillery to the role of their primary offensive arm. This tendency was driven in part by the fact that artillery tactics and technology developed much more quickly than those of the infantry through the first part of the war, with gunners increasingly able to deliver faster, more accurate, and more elaborately arranged and coordinated fire missions.<sup>169</sup> As such, achieving fire superiority over the enemy and beating down his defences increasingly became the near exclusive task of the artillery, the infantry's role being largely reduced to conducting the final assault on an enemy battered to the point of submission by the guns; to paraphrase the French General Henri Petain, artillery was to conquer, while infantry was merely to occupy.<sup>170</sup> Infantry assaults were thus almost entirely predicated around elaborate artillery fire plans, including counterbattery fire against enemy artillery, the destruction of enemy strongpoints, and rolling barrages to suppress enemy defences ahead of the advancing infantry. Though infantry tactics and firepower certainly underwent extensive development and improvement by the end of the war, with the introduction of platoon-based fire and maneuver tactics not far removed from those of the German stormtroops, an elaborate level of artillery fire support remain central to the planning and execution of British battles.<sup>171</sup> Given the complexity of these fire plans, and the importance of coordinated and unified effort within them, they were generally established centrally at the highest levels of command. Given that the limited state of communications in the First World War would make it very

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<sup>168</sup> Samuels, *Command or Control?*, pp. 58-9, 63.

<sup>169</sup> French, *Raising Churchill's Army*, p. 27; French, "Doctrine and Organization in the British Army," pp. 498-99.

<sup>170</sup> Samuels, *Command or Control?*, pp. 107-10, 113; Frederick Myatt, *The British Infantry 1660-1945: The Evolution of a Fighting Force* (Poole: Blandford Press, 1983), pp. 181, 186.

<sup>171</sup> Timothy Harrison Place, *Military Training in the British Army 1940-1944: From Dunkirk to D-Day* (London: Frank Cass, 2000), pp. 36-41; Samuels, *Command or Control?*, pp. 113-14.

difficult to call for any changes to the fire plan once the units had left the telegraph and telephone lines in their trenches, the infantry were instead expected to conform their own actions to the plan, to “keep up with the barrage” and conform to the set artillery timetable – or risk losing their vital support. The actions of infantry units were thus generally laid down in detail in advance, with the troops to follow those set plans and timetables to the letter.

Almost inevitably, the British soon discovered that this level of strict choreography and fire support could only be maintained for a relatively short period on the offensive. As units advanced into unknown situations in the enemy rear, they would quickly go beyond both the scope of their set plans and the range of their artillery support; many early offensives achieved a degree of initial success, but then failed as they overextended and outran their plans and support. These limitations led the British leadership to turn away from seeking deep penetrations and breakthroughs and towards what became known as “bite and hold” tactics, which called for limited advances against relatively close set objectives with the full benefit of elaborate advance planning and artillery support, followed by a period of consolidation where the artillery and reinforcements would be advanced, and new plans laid for the next stage of the battle.<sup>172</sup> Thus, instead of a single “flowing,” advance, the British broke their efforts down into an intermittent series of smaller operations that could be planned in detail, with the maximum possible use of concentrated and coordinated mass and firepower. These methods proved extremely effective in the latter stages of the war; the decisive “100 Days Campaign” of mid to late 1918, in particular, was entirely comprised of a steady series of these relatively small set-piece battles. Though the gains achieved by each individual stage were limited, they eventually added up, breaching the German defences that had held off all previous efforts and leaving the German Army on the brink of total defeat, eventually bringing about the November Armistice.

Given the sudden and comprehensive defeat of the British Expeditionary Force in France at the hands of the German “Blitzkrieg” in 1940, the British Army has long been charged by many analysts,

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<sup>172</sup> French, *Raising Churchill's Army*, p. 24; Strohn, *The German Army and the Defence of the Reich*, pp. 58-59; Myatt, *The British Infantry 1660-1945*, pp. 182-83.

historians, and other commentators with having failed to make a serious effort to adapt their rigid doctrine to the rapidly changing realities of modern warfare in the wake of the First World War.<sup>173</sup> The interwar British Army is often accused of being extremely conservative, even reactionary, on a social, intellectual, and institutional level, and thus largely ignoring the tactical and technological developments of the 1920s and 30s, and even many of the lessons of the First World War, in favour of restoring a traditional way of soldiering from the heyday of the British Empire and the colonial era. While there is certainly some truth to this, as many among the heavily class-based British officer class did remain highly conservative, devaluing modern developments and “intellectual soldiering,” and lacking much sense of real professionalism, the fact remains that the British Army did make serious efforts to adapt its doctrine to the demands of modern war in the interwar period, with several committees being formed right after the First World War to analyze it and derive useful lessons for building a doctrine suitable for a modern army.<sup>174</sup> The leadership of the British Army largely took the reports of these committees to heart, and, though there were many bitter disputes surrounding the specific details, it very quickly became widely accepted that the next major war would be heavily characterized by highly mobile mechanized combat.<sup>175</sup> Moreover, the British leadership was all too aware that Britain could not simply plan to refight the Great War, as the British public would clearly never again accept such a devastating level of losses.<sup>176</sup> The doctrinal and training manuals produced by the British Army in the 1920s and 1930s thus called for relatively small forces employing a high level of mechanization and firepower, as well as maneuver, flexibility, and combined arms cooperation, all acting as vital force multipliers – concepts broadly similar to those advanced by Hans von Seeckt in Germany.<sup>177</sup>

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<sup>173</sup> French, “Doctrine and Organization in the British Army,” pp. 497-98.

<sup>174</sup> Jeremy A. Krang, *The British Army and the People's War 1939-1945* (Manchester: Manchester University Press, 2000), pp. 1, 21, 37-39; Williamson Murray, “British Military Effectiveness in the Second World War,” in *Military Effectiveness, Volume 3 : The Second World War*, eds. Allan R. Millett and Williamson Murray (New York: Cambridge University Press, 2010), p. 91; French, “Doctrine and Organization in the British Army,” pp. 498, 501-2; French, *Raising Churchill's Army*, p. 28.

<sup>175</sup> French, “Doctrine and Organization in the British Army,” pp. 499, 512-13; French, *Raising Churchill's Army*, p. 12.

<sup>176</sup> Bull, *World War II Infantry Tactics: Squad and Platoon*, p. 11; French, *Raising Churchill's Army*, pp. 14-16.

<sup>177</sup> French, “Doctrine and Organization in the British Army,” pp. 404-5; French, *Raising Churchill's Army*, pp. 18-19.

This doctrine, however, was still heavily influenced by the legacy of the successful set-piece battle doctrine of the First World War. The *Field Service Regulations* of 1935 (FSR 1935), the last volume produced before the Second World War, still emphasized the initial, closely controlled, phase of any battle as being the most important and decisive one, with the more mobile and chaotic efforts to exploit any initial success being seen as much more difficult, with proportionally lower prospects or expectations for significant gains.<sup>178</sup> Similarly, a very strong emphasis remained upon the use of set-piece attacks, carefully prepared and managed in stages and centred around timed artillery fire programs.<sup>179</sup>

British interwar doctrine also remained heavily wedded to practices of centralized control, heavily emphasizing the concept in spite of its general incompatibility with the ideas it espoused on modern mobile warfare. In general, British generals, influenced by the continuing prominence of notions of hierarchy and class within both the Army and wider British society, took a fairly dim view of the intelligence and abilities of their junior officers and men, and were unwilling to trust them to function effectively without close direction and supervision.<sup>180</sup> As such, post-World War One British doctrine continued to allocate the great majority of decision making authority to senior commanders, with subordinates generally expected to simply follow their orders without question, and to ask for further instructions in the case of any unexpected developments. In this area, the British placed considerable hope in the ability of modern developments in communications, particularly the radio, to maintain this level of control and communications under the conditions of mobile warfare.<sup>181</sup> Thus, while FSR 1935 did speak of the need for low level initiative, it also continued to heavily emphasize the dominant role of a central commander in controlling battles to the greatest degree possible and to heavily qualify any delegation of

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<sup>178</sup> British General Staff, *Field Service Regulations, Vol. II. Operations – General (1935)* (London: His Majesty's Stationery Office, 1935), Section 57, pp. 115-17

<sup>179</sup> British General Staff, *Field Service Regulations, Vol. II. Operations – General (1935)*, Section 63, pp. 128-29; British General Staff, *Field Service Regulations, Vol. III. Operations – Higher Formations (1935)* (London: His Majesty's Stationery Office, 1935), Section 18-19, pp. 37-44.

<sup>180</sup> French, "Doctrine and Organization in the British Army," pp. 513-14; French, *Raising Churchill's Army*, p. 129.

<sup>181</sup> French, *Raising Churchill's Army*, p. 23.

authority to subordinate commanders.<sup>182</sup> FSR 1935 suggests that the latter, in particular, should only be done as a matter of exception and when absolutely necessary, when circumstance rendered central control impossible; moreover, it suggested that even when authority *was* delegated, the subordinate commander should keep to the original plan as much as possible, emphasizing that they should immediately report, and even ask permission, when making any changes, and that they would be held responsible should independent actions cause any disruption of the overall plan. In practice, the continuing focus upon strong central control within British doctrinal material, such as FSR 1935, seems to have reduced its calls for a greater degree of initiative and independent judgment among subordinate commanders to a matter of mere lip service. Throughout the Second World War, British commanders, and Field Marshal Montgomery in particular, showed a distinct tendency towards micromanagement of their battles, seeking to control every aspect down to the smallest tactical details.<sup>183</sup>

Moreover, the British Army experienced great difficulties in even effectively promulgating its doctrine among its troops. Critically, the British put much less focus and effort into the training of their officers and men than did the Germans. Despite the revisions to their overall doctrine, the training standards and regimes of the British Army remained highly traditional, based heavily around formal parade ground drills, the development of a “proper soldierly bearing” and appearance, basic physical fitness, and the rote memorization of various manuals on tactics and weaponry. Very little effort was made to practice realistic tactics, or to develop soldiers’ intellects or sense of tactical judgment. In fact, British Army training made concerted efforts to discourage any independent thinking or sense of initiative among the troops; Private James Sims of the 2<sup>nd</sup> Parachute Battalion, who started his military career in the Royal Artillery (RA), stated of his basic training: “if you had any spirit at all the RA seemed determined to break it.”<sup>184</sup> Even the Army’s officer academies and Officer Candidate Training Units (OCTU) focused

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<sup>182</sup> British General Staff, *Field Service Regulations, Vol. II. Operations – General (1935)*, Section 13, p. 27, Section 14 p. 28; British General Staff, *Field Service Regulations, Vol. III. Operations – Higher Formations (1935)*, Section 14, p. 30.

<sup>183</sup> Hart, *Montgomery and “Colossal Cracks,”* p. 131.

<sup>184</sup> Krang, *The British Army and the People’s War 1939-1945*, pp. 75-76, 79; French, *Raising Churchill’s Army*, pp. 48, 55-56; James Sims, *Arnhem Spearhead: A Private Soldier’s Story* (London: Sphere Books, 1980), p. 15.

much more on the learning of drill, proper bearing and personal conduct, the recitation of manuals, and ubiquitous competitive sports, than it did on instructing young officers in tactics and leadership, the general assumption being that such matters would be learned “on the job” with their units.<sup>185</sup> Much expectation was also placed upon the “natural” leadership skills and decision making abilities that were viewed as being inherent to men of the British upper class, and the idea that such men would simply be able to “figure things out” when needed.<sup>186</sup>

These problems of training were further exacerbated by the limited budgets and manpower available to the British Army in the interwar period, with the bulk of funds and quality recruits going to the “senior service” of the Royal Navy, or to the newer and more prestigious Royal Air Force.<sup>187</sup> The low pay, limited facilities, and arduous conditions of service that were all that the underfunded Army could offer ensured that it had great difficulty recruiting men with a level of intelligence necessary to fully comprehend and apply more than the most basic training and doctrine.<sup>188</sup> Moreover, the Army was badly hindered by a shortage of properly qualified instructors and appropriate training equipment, supplies, and facilities.<sup>189</sup> This ensured that exercises on any significant scale were rare in the interwar Army, and that those that were held were often very simplistic, heavily choreographed, and highly unrealistic in their conditions.<sup>190</sup> Given these limitations, it was much easier and cheaper for the overworked British training establishment to focus their efforts on matters such as traditional discipline and marching drills.<sup>191</sup>

In addition, the promulgation of doctrine was hindered by the fact that there was no centralized authority or standards for training within the British Army; the interpretation of official doctrine and the development of actual programs of training was largely left up to the tastes and whims of individual

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<sup>185</sup> French, *Raising Churchill's Army*, pp. 58-59, 75; Samuels, *Command or Control?*, pp. 44-47; Place, *Military Training in the British Army 1940-1944*, pp. 46, 48-49.

<sup>186</sup> French, *Raising Churchill's Army*, pp. 21, 47.

<sup>187</sup> French, *Raising Churchill's Army*, pp. 12, 64-65; John Peaty, “Operation MARKET GARDEN: The Manpower Factor,” in *Operation Market Garden: The Campaign for the Low Countries, Autumn 1944: Seventy Years On*, eds. John Buckley and Peter Preston-Hough (Solihull: Helion & Company, 2016), p. 70.

<sup>188</sup> French, *Raising Churchill's Army*, pp. 49-50, 64-65.

<sup>189</sup> Krang, *The British Army and the People's War 1939-1945*, p. 83; French, “Doctrine and Organization in the British Army,” p. 513; French, *Raising Churchill's Army*, p. 55.

<sup>190</sup> Corum, *The Roots of Blitzkrieg*, pp. 203-4; Place, *Military Training in the British Army 1940-1944*, pp. 28, 32-34.

<sup>191</sup> French, *Raising Churchill's Army*, p. 57; Samuels, *Command or Control?*, pp. 118-19.

divisional and battalion commanders, ensuring a wide variety of standards and practices among various units.<sup>192</sup> Furthermore, as historian Jeremy Krang notes, many of these middle ranking officers were actually more conservative than the army's senior leadership, being heavily invested in the traditional skills and practices with which they had advanced through the ranks and less willing or able to take a broader view of the matter.<sup>193</sup> As such, many of these officers proved entirely unwilling to adopt new doctrine or practices that would effectively invalidate their own hard-earned training and experiences. This general neglect of training proved to be a critical impediment to the British Army's ability to put *any* sort of new doctrinal ideas into practice - training being the effective "connective tissue" between the theory of doctrine and actual practice employed by armies in the field.

Thus, by the time that the Second World War broke out, the British Army was effectively caught "mid-stream," having officially adopted a partially modernized doctrine, but having been unable to properly prepare its forces to implement it. These shortcomings were perhaps best demonstrated by the British Army's relatively clumsy early efforts to conduct mobile mechanized warfare in North Africa, a field in which it proved badly outclassed by General Erwin Rommel's Afrika Korps.<sup>194</sup> The key turning point for British doctrine and fighting methods in the Second World War came with the arrival of then-Lieutenant-General Bernard Montgomery in North Africa in August 1942, to take command of the struggling 8<sup>th</sup> Army. Montgomery quickly came to recognize the severe weaknesses and limitations of the forces under his command, particularly the overall low standards of training and tactics and the general weakness of the officer corps in exercising effective command. Montgomery also saw that the 8<sup>th</sup> Army's most effective assets to date had been the gunnery of the Royal Artillery and the support provided by the Desert Air Force.<sup>195</sup>

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<sup>192</sup> French, "Doctrine and Organization in the British Army," p. 514; French, *Raising Churchill's Army*, p. 22; Murray, "British Military Effectiveness in the Second World War," p. 112.

<sup>193</sup> Krang, *The British Army and the People's War 1939-1945*, pp. 139-41.

<sup>194</sup> French, *Raising Churchill's Army*, pp. 215-20, 232, 239; Murray, "British Military Effectiveness in the Second World War," pp. 110-12, 118-19.

<sup>195</sup> Montgomery, *El Alamein to the River Sangro/Normandy to the Baltic*, p. 9; Horrocks, *A Full Life*, pp. 132-34; Murray, "British Military Effectiveness in the Second World War," p. 113.

In light of these strengths and weaknesses, Montgomery effectively turned to a partial “reversion” to the set-piece doctrine of 1918, updated for the prevailing conditions of 1942.<sup>196</sup> This traditional doctrine would play to both his army’s strengths and limitations, placing a heavy reliance upon artillery firepower, while making relatively limited demands upon his weaker infantry and armoured arms.<sup>197</sup> Montgomery was a particularly strong advocate of the principle of centralized control, and always sought to carefully plan and prepare for his operations well in advance, carefully formulating a “master plan,” and then exerting as much personal control over the execution of those plans as he could, what he called keeping a “firm grip,” seeking to control as many potential variables as possible and keeping close tabs on his subordinates to ensure that they did not deviate from his intentions.<sup>198</sup> Montgomery’s “revised” command doctrine was thus less a new innovation as it was a clarification of the contradictions inherent in British interwar doctrine, largely discarding the elements on flexibility of command and mobile warfare – for which the army had proven poorly suited – and emphasizing those of firepower and meticulous central control.

The 2<sup>nd</sup> Battle of El Alamein quickly became the first demonstration of this reworked fighting method, a battle that “established Monty’s reputation as a master of the set-piece battle.”<sup>199</sup> El Alamein served as a basic template for most of Montgomery’s subsequent operations, in that he took considerable time before the battle to lay plans and train his army, made extensive use of firepower in the form of artillery and air power, and proceeded slowly and cautiously once engaged, seeking to avoid any risk of defeat, even at the expense of opportunities to seek a greater victory.<sup>200</sup> The battle also demonstrated the limitations of this methodology, as the Afrika Korps, though heavily defeated, was able to successfully

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<sup>196</sup> French, *Raising Churchill’s Army*, p. 240.

<sup>197</sup> Montgomery, *El Alamein to the River Sangro/Normandy to the Baltic*, pp. 16, 20; Hart, *Montgomery and “Colossal Cracks,”* pp. 7-8.

<sup>198</sup> French, *Raising Churchill’s Army*, pp. 246, 249; Hart, *Montgomery and “Colossal Cracks,”* pp. 38-39, 84-85.

<sup>199</sup> Horrocks, *A Full Life*, p. 137.

<sup>200</sup> Montgomery, *El Alamein to the River Sangro/Normandy to the Baltic*, pp. 20, 24-28, 31-34, 46; French, *Raising Churchill’s Army*, p. 250; Horrocks, *A Full Life*, pp. 124-25.

disengaged and retreat to Tunisia in the face of Montgomery's slow and meticulous pursuit.<sup>201</sup> El Alamein and the remainder of the Mediterranean campaign quickly established the set-piece battle as Montgomery's "signature," with his efforts almost always characterized by a careful matching of his plans to the capabilities of his forces, the maximum employment of supporting firepower, and relatively limited missions being assigned to his infantry and armoured forces.<sup>202</sup>

Thus, when appointed as commander of what would become the 21<sup>st</sup> Army Group for the invasion of Northwest Europe in January 1944, Montgomery naturally brought this successful doctrine, which was already being introduced in training throughout the British Home Forces, with him.<sup>203</sup> With Montgomery serving as the overall commander of the Allied ground forces for the initial phases of the Allied invasion, the plans for the battle of Normandy bear the hallmark of his methods. Moreover, several of the commanders he appointed to key positions throughout the 21<sup>st</sup> Army Group, such as General Dempsey of the 2<sup>nd</sup> Army, and General Horrocks of XXX Corps, were hand-picked "acolytes" of his from North Africa, who had largely learned their craft under his tutelage and closely followed his methods.<sup>204</sup> Montgomery's plans for Normandy called for a steady advance via a series of limited local attacks, backed by the full weight of Allied artillery and air power, seeking to wear down the German armies gradually rather than with a single decisive blow, and with major mobile operations planned to take place only after the Germans had been all but defeated by this relentless attrition.<sup>205</sup>

The actual conduct of the campaign in Normandy closely followed these patterns, with British and American operations generally being characterised by considerable caution and meticulousness; most were of a fairly limited scale, being planned carefully in advance with extensive provision of artillery and air support, and set limited objectives of capturing key pieces of terrain or simply inflicting losses upon

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<sup>201</sup> Montgomery, *El Alamein to the River Sangro/Normandy to the Baltic*, pp. 34-37; Horrocks, *A Full Life*, pp. 140-41.

<sup>202</sup> Montgomery, *El Alamein to the River Sangro/Normandy to the Baltic*, pp. 56-58, 63, 126-31; Horrocks, *A Full Life*, pp. 148-50; Eisenhower, *Crusade in Europe*, pp. 205-6; Hart, *Montgomery and "Colossal Cracks,"* pp. 5-6.

<sup>203</sup> Montgomery, *El Alamein to the River Sangro/Normandy to the Baltic*, pp. 153-54; Hart, *Montgomery and "Colossal Cracks,"* pp. 8, 79-80.

<sup>204</sup> Horrocks, *A Full Life*, pp. 99, 126, 180-82; Powell, *The Devil's Birthday*, p. 82.

<sup>205</sup> Hart, *Montgomery and "Colossal Cracks,"* pp. 10-11, 92-5, 98-100.

the enemy. Though many German observers criticized this approach as far too slow and wasteful of opportunities – largely due to its clear contrast with their own practices – the German Army also could muster very little in the way of a truly effective long term response to it. Though the Germans could certainly win individual battles, the Allies superiority in manpower and material meant that they would almost inevitably win any prolonged battle of attrition. Most significantly, the Allies slow, cautious and meticulous approach to planning largely denied the Germans any chance to inflict any serious reverses with major counterattacks against overextended and vulnerable assault forces, as they had so frequently done to Soviet forces on the Eastern Front; though German counterattacks often stopped Allied offensives and inflicted losses, they were never able to change the overall operational situation to a meaningful extent.<sup>206</sup> Montgomery's conduct of the land battle in Normandy ensured that German forces were steadily driven back and worn out, eventually allowing American forces to pierce their emaciated lines, breaking out from Normandy and eventually driving the Germans from France – though once again, the relatively slow pace of their mobile operations and pursuit ensured that a sizeable portion of the German *Westheer* would live to fight another day.

The Battle of Normandy thus served as a very strong testimony to the effectiveness of the set-piece battle doctrine employed by the 21<sup>st</sup> Army Group in 1944. Though there is much evidence that the German Army outclassed its Allied opponents on a man for man, or unit for unit basis, the Allies' doctrine allowed them fight in a way that maximized their strengths while minimizing their weaknesses.<sup>207</sup> In return, the German Army was left with no effective reply as long as the Allies remained able to dictate the pace of the fighting; the Allies' cautious approach limited German ability to bring their superiority in small-unit combat and maneuver warfare to bear.

In Operation Market Garden, however, Montgomery seems to have almost entirely discarded the doctrinal tenets and practices that had brought him and his forces so much success to date, in that he

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<sup>206</sup> Hart, *Montgomery and "Colossal Cracks,"* pp. 99-100.

<sup>207</sup> Niklas Zetterling, *Normandy 1944: German Military Organization, Combat Power and Organizational Effectiveness* (Winnipeg, MN: J.J. Federowicz, 2000), pp. 87-98; French, *Raising Churchill's Army*, p. 273; Murray, "British Military Effectiveness in the Second World War," p. 129.

prepared a plan that ran almost entirely contrary to British doctrine as it was practiced in mid-1944. Most notably, his expectation that XXX Corps' armoured spearhead would be able to rapidly exploit the initial breakthrough and rush through over 60 miles of German-occupied territory along a single road to link up with the airborne forces and reach Arnhem, flew in the face of the way that British forces generally operated. The operational orders for Operation "Garden" – the ground component of the overall operation – called for the leading brigade of XXX Corps, the 5<sup>th</sup> Guards Armoured Brigade, to reach its final objective at the town of Nunspeet on the Zuider Zee in a maximum of five days, but ideally within three, on D+2; Arnhem, and the final link up with the parachute forces, was to be reached in one to three days.<sup>208</sup> This plan was based around the fact that the Allied leadership, based on optimistic intelligence estimates and their own wishful thinking, generally believed that the German forces, badly depleted in the wake of their defeat in Normandy, would not be able to muster much resistance beyond the "crust" of their front lines along the Meuse-Escaut Canal. The Germans were thought to have little in the way of useful reserves behind this line, and so the bulk of planning for XXX Corps' assault was focused on achieving the initial breakthrough, with the rest of the operation being seen largely as a matter of simple pursuit and exploitation.<sup>209</sup> The presence of the new and still forming 1<sup>st</sup> Fallschirmarmee in the area was largely dismissed by Allied intelligence beyond its front line along the Canal, with it – fairly accurately – assessed as a hodgepodge force of mostly second line forces and stragglers.<sup>210</sup> The Allied leadership was also largely aware of the presence of the II SS Panzer Korps in the area – despite long standing assertions by several historians – but this too was largely dismissed based on the assessment, again fairly accurate,

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<sup>208</sup> WO 171/605 *War Diary HQ 5<sup>th</sup> Guards Armoured Brigade, Operational Order No. 1 – Operation "Garden,"* p.2; WO 171/341 *War Diary HQ 30 Corps, Operational Instruction No. 24 – Operation "Garden,"* 15<sup>th</sup> September 1944, p. 6; WO 205/873 *Report on Operations "Market" and "Garden," September to October 1944,* p. 1.

<sup>209</sup> WO 171/376 *War Diary HQ Guards Armoured Division, Intelligence Summary No. 68,* 16<sup>th</sup> September 1944; WO 171/638 *War Diary HQ 32<sup>nd</sup> Guards Brigade – Brigade Intel Summaries, Starting from 1<sup>st</sup> Sept 1944 No.45,* 17<sup>th</sup> September 1944, p. 2; WO 171/1252 *War Diary 5<sup>th</sup> Battalion Coldstream Guards,* 17<sup>th</sup> September 1944; WO 205/873 *Report on Operations "Market" and "Garden," September to October 1944,* pp. 1, 6; Kershaw, *"It Never Snows in September,"* pp. 33-35; Cirillo, *"Market Garden and the Strategy of the Northwest Europe Campaign,"* p. 44.

<sup>210</sup> WO 171/638 *War Diary HQ 32<sup>nd</sup> Guards Brigade – Brigade Intel Summaries, Starting from 1<sup>st</sup> Sept 1944 No.42,* 11<sup>th</sup> September 1944; LoFaro, *The Sword of St. Michael,* p. 306.

that it currently mustered only a very small fraction of its notional strength and had not yet been able to conduct its planned refits.<sup>211</sup>

At Operation Garden's outset, the breakout of the Guards Armoured Division from the Neerpelt Bridgehead was enabled by a typical application of massed firepower within a carefully prepared and orchestrated plan. This plan called for the Guards' path to be "paved" by a twenty-three minute rolling barrage fired by six field and three medium artillery regiments and advancing 200 yards per minute just ahead of the advancing column, supplemented by timed concentrations fired on known or suspected German strongpoints by a further three field regiments and one heavy, a total of over 300 guns firing at maximum rate.<sup>212</sup> This gunfire would be supplemented by the efforts of eight squadrons of rocket-armed Hawker Typhoon fighter-bombers of the 2<sup>nd</sup> Tactical Air Force's 83 Group, which would provide a relay of strikes by eight aircraft every five minutes for the first 35 minutes of the attack, as well as a rotating "cab rank" of on-call aircraft that could be directed by the Forward Air Controllers (FACs) travelling at the head of the column against any targets of opportunity.<sup>213</sup>

In spite of its massive weight and intricacy, this plan failed to achieve the full effect desired. Though the bombardment knocked out the bulk of the German anti-tank guns located along the road, several ambush parties armed with Panzerfaust handheld recoilless anti-tank weapons concealed in foxholes survived and engaged the leading squadrons of the 2<sup>nd</sup> (Armoured) Battalion of the Irish Guards as they passed, quickly knocking nine tanks out of action and bringing the column to a halt.<sup>214</sup> Although the bulk of these ambushers were swiftly eliminated by the supporting infantry of the 3<sup>rd</sup> Irish Guards, assisted by strikes from the cab rank Typhoons, in the wake of the ambush the Guards Armoured

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<sup>211</sup> Ryan, *A Bridge Too Far*, pp. 89, 129, 134-35; Ritchie, *Arnhem – Myth and Reality*, p. 125, 129-30, 142-43; Harvey, *Arnhem*, pp. 31-34; Powell, *The Devil's Birthday*, pp. 40-45;

<sup>212</sup> WO 171/1253 War Diary 1<sup>st</sup> (Motor) Grenadier Guards – Royal Artillery Guards Armoured Division Task Table, 16<sup>th</sup> September 1944, p. 1-3; CAB 106/1054 A Short History of 30 Corps in the European Campaign 1944-1945, p. 32; WO 171/605 War Diary HQ 5<sup>th</sup> Guards Armoured Brigade – "Future Ops," 15<sup>th</sup> September 1944; WO 171/605 War Diary HQ 5<sup>th</sup> Guards Armoured Brigade, Operational Order No. 1 – Operation "Garden," p. 4.

<sup>213</sup> WO 171/605 War Diary HQ 5<sup>th</sup> Guards Armoured Brigade, Operational Order No. 1 – Operation "Garden," p. 4; WO 205/1126 21 Army Group – Operation "Market Garden" – 17-26 September 1944, p. 36.

<sup>214</sup> Horrocks, *A Full Life*, p. 212; WO 171/1256 War Diary 2<sup>nd</sup> (Armoured) Battalion Irish Guards, 17<sup>th</sup> September 1944; WO 171/1257 War Diary 3<sup>rd</sup> Battalion Irish Guards, 17<sup>th</sup> September 1944; Kershaw, *It Never Snows in September*, pp. 79-80.

Division, true to its doctrine, training, and experience, chose to withdraw its leading elements and repeat the entire bombardment process to eliminate any further resistance before resuming the advance; this was then followed by another short withdrawal and a third repetition of the barrage by the medium regiments when further resistance was encountered shortly thereafter at the villages of Hoek and Heuvel.<sup>215</sup>

The Guards Armoured Division's reliance upon the repeated use of prolonged set-piece bombardment programs to enable its advance ensured that, although they eventually broke through the German lines, the division had only managed to proceed seven out of the thirteen miles advance that had been planned for the first afternoon of the offensive by nightfall, laagering for the night at the town of Valkenswaard at a point when the plan had expected them to have already linked up with the 101<sup>st</sup> Airborne Division at Eindhoven.<sup>216</sup> There is no real evidence that the commanders of the Guards Division or XXX Corps even considered simply taking their chances and pressing on after the wreckage from the initial ambush was cleared from the road, trusting in speed and shock effect to see them through any remaining resistance (which was, in fact, minimal after the initial ambush positions had been eliminated). This was not a matter of cowardice or exhaustion in the face of heavy losses – the casualties of the two engaged battalions were in fact fairly light, with the 3<sup>rd</sup> Irish Guards only adding another seven dead and 19 wounded to the 2<sup>nd</sup>'s nine destroyed tanks, eight dead, and a handful of wounded –but rather the fact that this was simply the way that the British Army of 1944 did things, seeking to completely overwhelm even the lightest resistance with firepower and then pausing to rest, regroup, and plan anew in the wake of a day's fighting.<sup>217</sup> Lieutenant John Gorman of the Guards later noted with some chagrin that the Guards Division's decision to halt for the night after such limited progress was more a matter of ingrained habit than a conscious decision.<sup>218</sup> For his part, General Horrocks expressed complete satisfaction with the day's events, seeing the breakthrough attack as “a classic example of perfect co-operation between the

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<sup>215</sup> WO 171/341 *War Diary HQ 30 Corps, Battle Logs Sept 1944: Sitreps from 1535 to 1810*, 17<sup>th</sup> September 1944; WO 171/1256 *War Diary 2<sup>nd</sup> (Armoured) Battalion Irish Guards*, 17<sup>th</sup> September 1944; WO 205/1126 *21 Army Group – Operation “Market Garden” – 17-26 September 1944*, p. 37.

<sup>216</sup> Ryan, *A Bridge Too Far*, p. 217, 292.

<sup>217</sup> WO 171/1257 *War Diary 3<sup>rd</sup> Battalion Irish Guards*, 17<sup>th</sup> September 1944; Reynolds, *Sons of the Reich*, pp. 124-25.

<sup>218</sup> Ryan, *A Bridge Too Far*, p. 292.

R.A.F. and the Army,” and stating that the 17<sup>th</sup> “ended happily.”<sup>219</sup> In a similar vein, XXX Corps’ Intelligence Summary for the day suggested a complete lack of concern for the delays, simply assuming that the worst was now behind them and that it would likely be a simple matter to press on and link up with the airborne the next day.<sup>220</sup> It is also worth noting that the Guards Armoured Division was also well known, even within the British Army, for the conservative and ponderous nature of its battle tactics, with its efforts in Normandy generally being characterized by prolonged preparations for each stage of an attack, and slow, deliberate advances even against light opposition; it was hardly a reasonable prospect to expect such a force to completely alter its entire way of waging war overnight, purely because it was ordered to do so.<sup>221</sup> Moreover, it is far from clear that any other British division would have performed much better, given the nature of their overall doctrine and training.

This cautious, stop and start progress from XXX Corps continued throughout the campaign; when faced with any degree of resistance, the Guards Division more often than not chose to halt and prepare a fully supported set-piece attack to overwhelm the defenders. Early on the 18<sup>th</sup> around the town of Aalst, for example, the Guards Division, having just resumed its advance from the previous day, encountered a German roadblock based around four 88mm dual-purpose (anti-aircraft and anti-tank) guns and a couple of self-propelled anti-tank guns. Despite the limited nature of this resistance, to which it is not even clear if the Guards even lost any tanks, the Irish Guards’ leading squadron chose to hang back and engage these guns in a prolonged and indecisive long-range firefight while they waited for artillery and air support. In the end, it was after 1730 when the Guards Armoured Division finally resumed its advance, nearly ten hours after the engagement began at 1000, after a prisoner came in stating that the flak crews had just been ordered to abandon their immobile guns and withdraw. This prolonged delay meant that it was dusk before the division had linked up with the 101<sup>st</sup> Division at Eindhoven, with it then proceeding to Son to

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<sup>219</sup> Horrocks, *A Full Life*, p. 213.

<sup>220</sup> WO 171/341 *War Diary HQ 30 Corps Intelligence Summary No. 502*, 2359, 17<sup>th</sup> September 1944, p. 2.

<sup>221</sup> Peaty, “Operation MARKET GARDEN: The Manpower Factor,” pp. 65-66; Place, *Military Training in the British Army 1940-1944*, p. 121; Ritchie, *Arnhem – Myth and Reality*, p. 238.

begin replacing the blown bridge. The Guards' cautious set-piece tactics had again cost nearly half a days' worth of progress towards Arnhem.<sup>222</sup>

Perhaps the best known act of delay on the part of XXX Corps during Market Garden came in the wake of the capture of the Nijmegen bridges in the evening of September 20<sup>th</sup> by the combined efforts of the Guards and the 82<sup>nd</sup> Airborne Division. Here, the leading elements of the Guards Division, having stormed the road bridge in the wake of a daring assault crossing of the Waal River by elements of the 3<sup>rd</sup> Battalion of the American 504<sup>th</sup> Parachute Infantry Regiment that captured the far end of the bridges, chose to disregard the increasingly heated entreaties of the exhausted American paratroops to take advantage of their shock assault to rush on through the night to Arnhem before the Germans could recover and reform their lines. Instead the Guards, rather predictably in light of their actions so far, chose to consolidate the bridgehead gained, regroup, and prepare for a full scale attack the next day.<sup>223</sup> This was in fact a not entirely unreasonable precaution, given the unknown state of German defences on the so-called Betuwe or "Island" of land between the Waal and the Lower Rhine. Though General Harmel of the 10<sup>th</sup> SS Panzer Division, who had commanded the unsuccessful defence of the Nijmegen bridges, later noted that there was almost nothing in the way of German forces between XXX Corps and Arnhem on the evening of the 20<sup>th</sup>, the British naturally had no knowledge of this, and every reason to expect trouble in the wake of the unexpected resistance that Allied forces had encountered all across the Market Garden battle zone so far. It is thus quite understandable that the British wanted to ensure they were well-prepared for whatever lay ahead.<sup>224</sup> Moreover, the Irish Guards Group that had advanced into the bridgehead had only limited infantry support and very low ammunition supplies, with their tanks having supported the 3/504<sup>th</sup>'s assault crossings with their fire earlier in the day.<sup>225</sup> Though they certainly could

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<sup>222</sup> WO 171/376 *War Diary HQ Guards Armoured Division, Intelligence Summary No. 70*, 18<sup>th</sup> September 1944; WO 171/638 *War Diary HQ 32<sup>nd</sup> Guards Brigade – Brigade Intel Summaries, Starting from 1<sup>st</sup> Sept 1944*, No. 46, 19<sup>th</sup> September 1944; WO 171/1256 *War Diary 2<sup>nd</sup> (Armoured) Battalion Irish Guards*, 18<sup>th</sup> September 1944; Ritchie, *Arnhem – Myth and Reality*, p. 239; Ryan, *A Bridge Too Far*, pp. 292-93.

<sup>223</sup> Gavin, *On to Berlin*, pp. 181-82; WO 205/873 *Report on Operations "Market" and "Garden," September to October 1944*, p. 12; LoFaro, *The Sword of St. Michael*, pp. 389-90; Ryan, *A Bridge Too Far*, p. 403.

<sup>224</sup> Ryan, *A Bridge Too Far*, p. 399; Kershaw, *"It Never Snows in September,"* pp. 221-24.

<sup>225</sup> Harclerode, *Arnhem: A Tragedy of Errors*, p. 118; Powell, *The Devil's Birthday*, pp. 162-63.

have tried to proceed, relying upon speed, shock, and what little ammunition they had left to get through – and may well have succeeded, given the gap that the Waal crossing had torn in the German lines – it was hardly a normal British practice to take such a degree of risk with their troops' lives by sending them into an unknown situation in such a poorly prepared and exhausted state. As stated above, British doctrine and experience to date meant that they generally preferred to “play it safe” rather than take risks in pursuit of greater potential gains, a generally sound practice, but one entirely incompatible with an operation predicated upon speed.

Moreover, Horrock's memoirs suggest that, as after the initial breakthrough on the 17<sup>th</sup>, he believed that his corps had accomplished more than enough for a single day's fighting, having played its part in getting over the Waal, and had thus earned a brief respite before resuming their efforts the next day, a sentiment entirely consistent with British doctrine's views on the importance of conducting battles in carefully controlled and limited stages to avoid overextension; once again, though still well short of the final objective, the commander of the XXX Corps “went to bed a happy man.”<sup>226</sup> Thus, when Horrocks later responded to criticisms, particularly by General Urquhart, that he and his troops had shown very little sense of urgency or drive on the road to Arnhem by stating that “the sense of desperate urgency was there all right,” and that “it was not for want of trying that we failed to arrive in time,” it seems likely that he was being entirely sincere; certainly his troops did not move as fast as *other* troops could or might have under the circumstances, but they perhaps did advance as quickly as *they* could, given the limitations of their doctrine, training, and experience.<sup>227</sup> Put simply, this was what “urgency” looked like for the British Army in 1944; a steady advance, but still one cautiously made, broken into manageable stages, and backed by careful planning and preparation and a maximum of fire support at every step of the way. In the end, the Guards Armoured Division – only partially due to their own unique faults - were just not well suited to the demands that Montgomery placed upon them for Operation Market Garden, and few other British formations in the fall of 1944 would have done substantially better under the circumstances,

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<sup>226</sup> Horrocks, *A Full Life*, p. 221.

<sup>227</sup> Urquhart, *Arnhem*, p p. 119, 203-4; Horrocks, *A Full Life*, p. 230.

a fact of which Montgomery, who was ordinarily so conscious and accommodating of the limitations of his forces in his planning, should have been far better aware.

## CHAPTER 5: THE ROLE OF BRITISH TACTICAL AND COMMAND DOCTRINE IN OPERATION MARKET

Turning to the role that doctrine and training played in the travails of the 1<sup>st</sup> Airborne Division at Arnhem, it must first be noted that while most historical accounts of the famous “Red Devils” describe them as an “elite,” and one of the British Army’s best trained and most effective units, there is considerable reason to believe that the general flaws and limitations of British doctrine and training applied almost as much to them as it did to their ground-bound comrades.<sup>228</sup> British paratroops undoubtedly went through a longer and more intensive training regime than most British troops. The evidence suggests, however, that the majority of that extra training was centred either around the actual act of parachuting from aircraft, or around the development of individual skills such as marksmanship, fieldcraft, or physical fitness; there is very little evidence that British airborne troops received an unusual level or quality of tactical training at either the small or large unit scale.<sup>229</sup> The War Diary of the 1<sup>st</sup> Parachute Battalion for the month of August 1944, for example, lists only a few days of combat exercises or “company training,” but the bulk of “normal training,” carried out on most days, seems to have consisted of PT (physical training) and route marches; the records of the 2<sup>nd</sup> Parachute Battalion for the same period are quite similar.<sup>230</sup>

Moreover, the few exercises the airborne troops did conduct seem to have been more formal “parade ground” maneuvers than realistic tactical training. Exercise “Golden Miller”, conducted by the 156<sup>th</sup> Parachute Battalion on August 31<sup>st</sup> 1944, focused on practicing transitions between the various textbook battalion formations, with a note emphasizing the importance of “proper spacing.”<sup>231</sup> As with most other British soldiers, the inculcation of proper discipline and obedience occupied a disproportionate

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<sup>228</sup> Sims, *Arnhem Spearhead*, p. 85; Harvey, *Arnhem*, p. 193; Harclerode, *Arnhem: A Tragedy of Errors*, p. 11; Powell, *The Devil’s Birthday*, p. 62.

<sup>229</sup> Sims, *Arnhem Spearhead*, pp. 16-17, 21; John Frost, *A Drop Too Many* (London: Cassell, 1980), pp. 195-96; Peter Harclerode, *Wings of War: Airborne Warfare 1918-1945* (London: Cassell, 2005), pp. 214-16, 225.

<sup>230</sup> WO 171/1236 War Diary 1<sup>st</sup> Battalion The Parachute Regiment, August 1944; WO 171/1237 War Diary 2<sup>nd</sup> Battalion The Parachute Regiment, August 1944.

<sup>231</sup> WO 171/1247 War Diary 156<sup>th</sup> Battalion The Parachute Regiment, Appendix B: Order for Exercise “Golden Miller,” 31<sup>st</sup> August 1944.

part of their training efforts, including practicing close order marching drill and other skills with little or no practical field application for airborne troops.<sup>232</sup> It is worth noting that General Browning, the effective founder of the British airborne arm and the 1<sup>st</sup> Airborne Division's original commanding officer, who had exercised a considerable influence in the establishment of its training regime, was a former member of the Grenadier Guards with a strong penchant for the Guards' traditional drill and discipline-centric training standards and a marked aversion to allowing too much freedom to his troops; two training pamphlets he wrote for the division emphasized the importance not only of discipline, which he called "the only road to victory," but also of proper turn out, saluting, and "soldierly bearing."<sup>233</sup> A fair proportion of the officers and men of the 1<sup>st</sup> Airborne Division were also volunteers from the Brigade of Guards, a corps well known for its discipline and toughness, but hardly for quick independent thinking or tactical innovation.<sup>234</sup> Overall, there is very little evidence that the standard, and fairly limited, British infantry doctrine or training was heavily modified to suit the unique requirements and challenges that airborne troops would inevitably face, particularly the relative paucity of centralized control or fire support that could be provided to their deep and often scattered operations behind enemy lines. The only major advantage in training or tactics that British paratroops seem to have enjoyed over British regular infantry was the fact that, as a new and highly prestigious special purpose force, which recruited mainly through men volunteering from other units, they tended to attract a considerable share of the most active, energetic, and aggressive officers and men within the British Army.<sup>235</sup>

Urquhart himself later lamented that his division's training did not seem to do enough to develop a suitable sense of initiative among its junior officers and NCOs, which proved to be a considerable hindrance at Arnhem.<sup>236</sup> Urquhart himself was hardly immune to the effects of this lack of specialized tactical training for the unique conditions of airborne combat; having taken command of the 1<sup>st</sup> Airborne

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<sup>232</sup> Sims, *Arnhem Spearhead*, pp. 33-34, 41.

<sup>233</sup> Sims, *Arnhem Spearhead*, pp. 17-18; LoFaro, *The Sword of St. Michael*, p. 411; Powell, *The Devil's Birthday*, pp. 37-38.

<sup>234</sup> Middlebrook, *Arnhem 1944*, p. 22.

<sup>235</sup> Peaty, "Operation MARKET GARDEN: The Manpower Factor," p. 68.

<sup>236</sup> Urquhart, *Arnhem*, p. 124.

Division in January 1944, fresh from commanding an infantry brigade in Italy and without any previous airborne experience, he commented in his memoirs that he saw no real distinction between the tactics required for airborne or standard infantry operations, with the only difference being the means by which they arrived on the battlefield.<sup>237</sup> Moreover, the very fact that Urquhart was appointed to the command of this division, in lieu of any candidate with useful experience in airborne combat, or even theory, suggests that the British leadership saw airborne divisions much the same way he did, as just infantry divisions that happened to fly into battle.

The limitations of the 1<sup>st</sup> Airborne Division's training were further exacerbated by their relative lack of combat experience, which might have "smoothed out" some of the rough edges in their training and honed their tactical and command abilities. Prior to Market Garden, the division had never operated as a single unit. Although some of its battalions, particularly those of the 1<sup>st</sup> Parachute Brigade, had been in service since 1941 and seen action in the Mediterranean, its overall percentage of experienced troops was fairly low. Most of the units that had fought in North Africa, Sicily, and Italy had suffered significant casualties which had since been replaced by fresh recruits. Moreover, as the airborne arm eventually expanded to a size of two divisions and one independent brigade, the surviving core of veterans was diffused to form cadres for the new units, ensuring that they were fairly thinly spread by September 1944; Middlebrook estimates that only about half of the troops that landed during Market Garden had ever seen battle before.<sup>238</sup> In addition, even the unit's veterans had not been in combat for nearly a year prior to Market Garden, as the division had been held in reserve in England throughout the Normandy fighting; this ensured not only that the experienced men's skills would have become a bit rusty in disuse, but also that they would not have been personally familiar with the many developments in weaponry and tactics that had taken place since 1943.<sup>239</sup> With the Normandy fighting having just concluded, there would have been very little time for the lessons learned by the troops that had fought there, including their

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<sup>237</sup> Urquhart, *Arnhem*, pp. 13-15; Frost, *A Drop Too Many*, p. 194; Middlebrook, *Arnhem 1944*, p. 21.

<sup>238</sup> Middlebrook, *Arnhem 1944*, pp. 23-24, 26-28.

<sup>239</sup> WO 205/873 *Report on Operations "Market" and "Garden," September to October 1944*, p. 2; Middlebrook, *Arnhem 1944*, p. 39.

counterparts in the 6<sup>th</sup> Airborne Division, to have been recorded and promulgated to the forces still at home. Furthermore, the fact that the division had been kept nearly constantly on standby for possible operations through much of July, August and early September had limited the time the units of the 1<sup>st</sup> Division had to train.<sup>240</sup> Thus, despite its elite status, in September 1944 the 1<sup>st</sup> Airborne Division was a force largely new to combat and unfamiliar with the unique pressures and demands it would place upon an airborne division.

In the event, the limitations of the overly centralized and relatively inflexible British combat doctrine, which provided little scope for the exercise of initiative or independent action, and of the 1<sup>st</sup> Division's training and experience, quickly became readily apparent during Operation Market Garden. In keeping with British command doctrine, the plan for Operation Market (Market Garden's airborne component) laid out instructions for the airborne forces, and particularly those of the 1<sup>st</sup> Airborne Division, in detail, with march routes, timetables and combat sectors allocated to every sub-unit, governing all of their actions.<sup>241</sup> Perhaps the most defining characteristic of the tasks assigned to the 1<sup>st</sup> Airborne Division at Arnhem, in particular, was that they were almost entirely predicated around the virtual absence of German resistance of any significant scale to the division's landings and initial movements, in light of the aforementioned intelligence indications and favourable speculations about the virtual "void" of German forces supposed to exist behind the line of the Meuse-Escaut Canal. This expectation was the main reason that General Urquhart and the other 1<sup>st</sup> Airborne commanders had accepted, if somewhat reluctantly, the later highly-controversial air plan that landed the division seven to eight miles from its bridge objectives and in two separate waves, which would allow only the 1<sup>st</sup> Parachute Brigade to take the offensive towards Arnhem on the first day (as the 1<sup>st</sup> Air Landing Brigade had to hold the landing zones for the arrival of the 4<sup>th</sup> Parachute Brigade the next day), and required that brigade to march as quickly as it could to get to Arnhem, secure the bridges, and take up defensive positions. Though the air plan would later draw considerable criticism from both participants and

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<sup>240</sup> WO 171/1323 *War Diary 7<sup>th</sup> (Galloway) Battalion The King's Own Scottish Borderers*, 1<sup>st</sup> to 10<sup>th</sup> September 1944.

<sup>241</sup> WO 171/366 *War Diary HQ 1<sup>st</sup> Airborne Corps – Operation Market Operation Instruction No. 1*, pp. 1-6.

historians, the officers of the 1<sup>st</sup> Airborne Division generally seem to have accepted it without much argument at the time.<sup>242</sup>

In light of this expected lack of immediate German resistance, the plan called for the 1<sup>st</sup> Parachute Brigade to more or less simply march as quickly as they could to take up defensive positions around the bridge in Arnhem, with virtually no indication that any notable fighting was expected en route, with the 4<sup>th</sup> Parachute Brigade and the 1<sup>st</sup> Airlanding Brigade to join them in forming a perimeter around the city on the 18<sup>th</sup>.<sup>243</sup> The combat instructions for each of the division's subunits were focused almost exclusively upon the positions and responsibilities that each unit was expected to take up within the defensive bridgehead that would be formed around Arnhem once the bridges had been secured; in essence, it was clearly expected that the battle proper would only commence once the Germans sent in reinforcements to attack the divisional perimeter around the city, at a point when the division would be able to take advantage of a fortified position and the full coordinated weight of its infantry and artillery forces to hold off the incoming attacks.<sup>244</sup> The plans effectively offered no viable contingencies for what the units of the division were expected to do should they encounter significant resistance en route to Arnhem.

Thus, Brigadier Gerald Lathbury's plan for his 1<sup>st</sup> Parachute Brigade on the 17<sup>th</sup> was more one for a route march to an assembly point than for an assault on an enemy held town, emphasizing speed over all

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<sup>242</sup> Urquhart, *Arnhem*, pp. 6-7, 198; Harvey, *Arnhem*, pp. 38-42; Cirillo, "Market Garden and the Strategy of the Northwest Europe Campaign," pp. 46-47; Middlebrook, *Arnhem 1944*, pp. 15-18; Powell, *The Devil's Birthday*, pp. 33-37; Ritchie, *Arnhem – Myth and Reality*, pp. 17-18, 178-79, 193-203; Maurice Tugwell, *Arnhem: A Case Study* (London: Thornton Cox, 1975), pp. 24-26.

<sup>243</sup> WO 171/393 War Diary HQ 1<sup>st</sup> Airborne Division, 1<sup>st</sup> Air Landing Brigade Operational Order No. 1, Annexure F, 13<sup>th</sup> September 1944; WO 171/393 War Diary HQ 1<sup>st</sup> Airborne Division – Report on Operation "Market", Arnhem 17-26 Sept. 1944, 10<sup>th</sup> January 1945, pp. 2-3; WO 171/393 War Diary HQ 1<sup>st</sup> Airborne Division, Annexure C: 1<sup>st</sup> Airborne Division Op instruction No. 9 – Confirmatory Notes on GOC's Verbal Orders, p. 1; WO 171/393 War Diary HQ 1<sup>st</sup> Airborne Division, 1<sup>st</sup> Parachute Brigade Operational Order No. 1, Annexure D, 13<sup>th</sup> September 1944, p. 3-4; WO 171/594 War Diary HQ 4<sup>th</sup> Parachute Brigade, Appendix B: Operation "Market," 4<sup>th</sup> Parachute Brigade Operational Order No. 1, 13<sup>th</sup> September 1944, pp. 1-4.

<sup>244</sup> Urquhart, *Arnhem*, pp. 10-11; WO 171/393 War Diary HQ 1<sup>st</sup> Airborne Division – Report on Operation "Market", Arnhem 17-26 Sept. 1944, 10<sup>th</sup> January 1945, p. 3; WO 171/393 War Diary HQ 1<sup>st</sup> Airborne Division, 1<sup>st</sup> Parachute Brigade Operational Order No. 1, Annexure D, Trace Map of Lines of Approach, Gun Posns, Rough Lines of Main Defensive Line and outer outpost line in Arnhem, 13<sup>th</sup> September 1944; WO 171/594 War Diary HQ 4<sup>th</sup> Parachute Brigade, Appendix B: Operation "Market," 4<sup>th</sup> Parachute Brigade Operational Order No. 1, 13<sup>th</sup> September 1944, pp. 1-4; WO 171/1243 War Diary 10<sup>th</sup> Battalion The Parachute Regiment, Intelligence Summary No. 1: Operation Market, 16<sup>th</sup> September 1944.

else. To maximize this speed, Lathbury divided his three battalions (the 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> Parachute Battalions) among the three roads leading from the division's landing zones west of Arnhem into the city proper, designated, from north to south, "Leopard," "Tiger," and "Lion," routes.<sup>245</sup> This disposition of the brigade left its three battalions too far separated from one another to provide effective support should any encounter significant resistance and, even more critically, left Lathbury without any significant reserve to deal with any unexpected developments.<sup>246</sup> Though the 1<sup>st</sup> Parachute Battalion was ordered to briefly act as a de facto brigade reserve at the outset of the operation, being held at the landing zones until the other two battalions were well on their way, it was released to its own mission within half an hour.<sup>247</sup> Though Lathbury can certainly be justly criticized for what turned out to be a badly flawed plan, it was entirely in keeping with the information and instructions he had been given by his superiors and, given the nature of British command doctrine and training, it is hardly surprising that he made every effort to follow them to the letter.

When the 1<sup>st</sup> Parachute Brigade encountered the defensive lines of Krafft's 16<sup>th</sup> Battalion, and later Kampfgruppe Spindler, Lathbury's plans, all too true to Moltke's famous adage about no plan ever surviving contact with the enemy, fell apart almost immediately. As each of the battalions along the two northern routes (with the 1<sup>st</sup> Battalion on Leopard and the 3<sup>rd</sup> on Tiger) came under Krafft's heavy fire and faced numerous small-scale counterattacks from about 1630, their orderly advance into Arnhem quickly degenerated into a messy series of scattered skirmishes in the woods and suburbs along the western outskirts of the city. Unable to support one another or to call upon any aid from the rear, each battalion was left to deal with whatever resistance was in front of them with their own fire and maneuver. Furthermore, though German accounts frequently noted the paratroops' determination and skill in

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<sup>245</sup> WO 171/592 *War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix A: Operation "Market", Story of 1 Parachute Brigade, Consolidated Report by Brigadier Lathbury*, 31<sup>st</sup> October 1944, p. 1; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division, 1<sup>st</sup> Parachute Brigade Operational Order No. 1, Annexure D*, 13<sup>th</sup> September 1944, pp. 1-2; WO 171/592 *War Diary HQ 1<sup>st</sup> Parachute Brigade, Operation Market: Outline of Events, 1<sup>st</sup> Parachute Brigade*, p. 1-3.

<sup>246</sup> Ritchie, *Arnhem – Myth and Reality*, pp. 184-86.

<sup>247</sup> Harvey, *Arnhem*, p. 62; Powell, *The Devil's Birthday*, p. 64.

marksmanship, here and throughout the battle, the ability of the two battalions' field officers to maneuver their units tactically seems to have been limited.<sup>248</sup>

The war diaries of the battalions of the 1<sup>st</sup> Parachute Brigade and other records make it clear that the standard response whenever a pocket of resistance was encountered on their advance into Arnhem was for the leading company to deploy and engage the enemy, while the remainder of the battalion column sought to divert around the firefight and then continue along the route to the bridges; orders issued by the 2<sup>nd</sup> Parachute Battalion specifically stated that any resistance en route was simply to be bypassed in the interest of speed – clearly expecting to encounter only small outposts or patrols – and similar orders were issued to that battalion's brigade mates, explaining their conduct in this phase of the battle.<sup>249</sup> Though the 1<sup>st</sup> and 3<sup>rd</sup> Parachute Battalions' commitment to maintaining their original mission was in some ways an admirable display of discipline and focus, in the face of the widespread and deep German resistance its end result was to leave the companies of each battalion dispersed into a series of individual firefights, leaving their commanders with little ability to coordinate, concentrate, or even control their efforts; Lathbury later noted that "it was at this point that I realized I was losing control of the situation."<sup>250</sup> The advance thus degenerated into a confused "stop-start" series of clashes along the roads, as each battalion was repeatedly brought to a halt as they ran into new pockets of German resistance and tried to maneuver around them. As Private Walter Boldock of the 1<sup>st</sup> Parachute Battalion later observed: "We halted, then we started off again. Then we halted and dug in. Next, we moved on again, changing direction." With each separate battalion possessing only limited tactical capabilities of their own, and with no other free maneuver elements left to throw into the fray, Lathbury's lightly equipped and supported troops had no effective options for dealing with the German blocking lines

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<sup>248</sup> Kershaw, *"It Never Snows in September,"* pp. 106-8, 170, 183; Ryan, *A Bridge Too Far*, pp. 263-65.

<sup>249</sup> WO 171/592 War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix A: Operation "Market", Story of 1 Parachute Brigade, Consolidated Report by Brigadier Lathbury, 31<sup>st</sup> October 1944, p. 2-3; WO 171/592 War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix B: Diary of Events, 1<sup>st</sup> Parachute Battalion, September 1944, p. 1; WO 171/592 War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix D: Diary of Events, 3<sup>rd</sup> Parachute Battalion, September 1944, p. 1-2; WO 171/1237 War Diary 2<sup>nd</sup> Battalion The Parachute Regiment, Operation Market, Operational Order No. 1, 16<sup>th</sup> September 1944, p. 3; WO 171/592 War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix E: Comments on Operation Market, September 1944.

<sup>250</sup> Quoted in Ryan, *A Bridge Too Far*, p. 234.

beyond trying to outflank them via maneuver; the 1<sup>st</sup> and 3<sup>rd</sup> Battalions, however, quickly found themselves confronted by an almost continuous series of successive lines thrown across their paths. When maneuver proved futile, each battalion simply got further and further bogged down in a costly series of frontal assaults against steadily strengthening German defences, ensuring that they made only minimal progress prior to their decisive defeat on the morning of the 19<sup>th</sup>.<sup>251</sup> Only the 2<sup>nd</sup> Battalion, which, as mentioned previously, had fortuitously managed to avoid the German defensive line, was able to achieve its original objectives and reach the bridge.<sup>252</sup>

Overall, it is quite clear that the 1<sup>st</sup> Parachute Brigade's training and tactical doctrine left its units utterly unprepared for this sort of confused, close-range, small-unit fighting, even though such fighting had been a common characteristic of most airborne operations to date; right from the very start, each battalion rapidly fragmented in the course of their relatively clumsy efforts to employ fire and maneuver tactics, quickly rendering them combat ineffective. Moreover, the doctrine of central control almost entirely failed the brigade as Lathbury, even though he kept close behind the front with his troops, in the prevailing confusion quickly lost control of any troops beyond his immediate vicinity. Lathbury's isolation was such that he remained largely unaware of the scale of the resistance the 1<sup>st</sup> Battalion (he remained mainly with the 3<sup>rd</sup> on Tiger route through the 17th) was facing until a report got through to him early on the 18<sup>th</sup>.<sup>253</sup>

This rapid breakdown of the 1<sup>st</sup> Parachute Brigade under fire was only exacerbated by the general inexperience of its troops, as the largely green soldiers, increasingly deprived of the direct supervision and direction of their officers as the fighting in the close wooded and suburban terrain became increasingly confused, began to shy away from the fire that they faced, often choosing to simply take cover, returning the occasional snap shot, while waiting upon further developments, rather than taking

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<sup>251</sup> WO 171/592 War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix A: Operation "Market", Story of 1 Parachute Brigade, Consolidated Report by Brigadier Lathbury, 31<sup>st</sup> October 1944, pp. 3-5, 8.

<sup>252</sup> WO 171/592 War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix A: Operation "Market", Story of 1 Parachute Brigade, Consolidated Report by Brigadier Lathbury, 31<sup>st</sup> October 1944, p. 4; WO 171/592 War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix C: Diary of Events, 2<sup>nd</sup> Parachute Battalion, September 1944, pp. 1-2.

<sup>253</sup> WO 171/592 War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix A: Operation "Market", Story of 1 Parachute Brigade, Consolidated Report by Brigadier Lathbury, 31<sup>st</sup> October 1944, pp. 3, 6-7.

any initiative to try to overcome the resistance themselves.<sup>254</sup> Urquhart later commented upon this tendency among his troops, stating that they generally proved quite “sticky” in the advance, frequently diving for cover even in the face of even minimal fire and requiring much effort by officers - including himself – to get them up and moving again, and argued that there was a need for much better and more realistic pre-battle training in the future.<sup>255</sup>

Clearly the failure of the British Army to develop a greater sense of initiative and tactical skill among its troops and junior officers was a considerable detriment to the planned rush to Arnhem. With the airborne troops so often out of the control of higher authorities, they generally tended to either devolve into a confused mass, or take cover, stay put and wait for orders and/or help – a clear contrast to the tendency of German troops to take the offensive – or at least to do *something* - whenever possible in an uncertain situation. The doctrine of central control ensured that confusion or inaction were effectively the British Army’s “default setting” in the absence of specific direction, even in their supposedly elite parachute units.

The confusion and fragmentation that plagued the 1<sup>st</sup> Airborne Division at Arnhem was exacerbated still further by the fact that the division’s communications network – which would clearly have been vital to any plan relying upon centralized control – broke down almost entirely right at the outset of the operation. The breakdown of the 1<sup>st</sup> Airborne Division’s radio communications is one of the better known failures of the operation, being prominently featured in the 1977 film version of Cornelius Ryan’s, *A Bridge Too Far*, and has been the subject of extensive discussion by several historians, often being cited as one of the most significant factors in the division’s defeat. The breakdown, which occurred due to a combination of unsuitable equipment and flawed networking procedures (the full details of which have been covered in some of the works cited here, and thus will not be discussed further here), was certainly a significant factor in the division’s ill fortunes, but a major part of the reason it had such a

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<sup>254</sup> Sims, *Arnhem Spearhead*, pp. 61-64; Urquhart, *Arnhem*, p. 199; Powell, *The Devil’s Birthday*, p. 66.

<sup>255</sup> Urquhart, *Arnhem*, p. 56; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division – Report on Operation “Market”, Arnhem 17-26 Sept. 1944*, 10<sup>th</sup> January 1945, p. 45.

crippling effect upon the division's ability to operate effectively was the fact that British doctrine relied so heavily upon central control.<sup>256</sup>

Though 1<sup>st</sup> Airborne Division's divisional communications network was rapidly set up and established soon after landing, the 1<sup>st</sup> Parachute Brigade's march towards Arnhem quickly took them out of the limited range of the Division HQ's sets on the landing zones, ensuring that Urquhart had entirely lost contact with his forward units within an hour of them setting off.<sup>257</sup> In light of this breakdown, and again in full alignment with British command doctrine, which encouraged generals to keep very close supervision over their subordinates, Urquhart quickly proved unable and/or unwilling to fully trust his subordinates' ability to carry out their missions without further direction, and thus set out from his HQ in a radio-equipped jeep to try to make contact in person with Lathbury and his battalion commanders, to ensure matters were proceeding smoothly and, more usefully, to assess the overall situation at the front for himself.<sup>258</sup> It is worth noting the Urquhart himself stated in his memoirs that the main message that he sought to carry forward to his subordinates was to "advance as quickly as possible to Arnhem" in light of the reported failure of the 1<sup>st</sup> Airborne Reconnaissance Squadron's coup de main effort – a course of action that was already clearly emphasized in the operations orders, and which any competent officer could reasonably be expected to already be carrying out if they had read those orders.<sup>259</sup> All the difficulties that followed were thus the result of Urquhart's desire - or need - to "double check" that his subordinates were following the relatively simple orders they had already been given. Urquhart's inspection tour quickly devolved into a mixture of comic-opera and disaster, however, as, though he soon managed to meet up with Lathbury on Tiger route, he and the brigadier quickly became caught up in the

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<sup>256</sup> WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division, Annexure T: 1<sup>st</sup> Airborne Division Signals Report on Operation Market, 17<sup>th</sup> Sep 1944 to 26 Sep 1944*, pp. 1-2; WO 205/623 *Operational Reports Market Garden, October 1944-January 1945, Appendix A: Comments on Report on Operation Market-Garden, Lessons, Operation "Market-Garden,"* 10<sup>th</sup> December 1944, pp. 1-3; Urquhart, *Arnhem*, p. 200; John W. Greenacre, "Assessing the Reasons for Failure: 1<sup>st</sup> British Airborne Signal Communications during Operation "Market Garden,"" *Defence Studies* 4, No. 3 (2004), pp. 283-84, 305-6; Middlebrook, *Arnhem 1944*, pp. 37-38; Powell, *The Devil's Birthday*, pp. 111-12.

<sup>257</sup> Urquhart, *Arnhem*, p. 36; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division, Annexure T: 1<sup>st</sup> Airborne Division Signals Report on Operation Market, 17<sup>th</sup> Sep 1944 to 26 Sep 1944*, p. 2.

<sup>258</sup> Urquhart, *Arnhem*, p. 36.

<sup>259</sup> Urquhart, *Arnhem*, p. 38; Harclerode, *Arnhem: A Tragedy of Errors*, pp. 71-72; Middlebrook, *Arnhem 1944*, pp. 128-29.

3<sup>rd</sup> Battalion's private battle.<sup>260</sup> Though their presence proved, at best, superfluous to the 3<sup>rd</sup> Battalion's fight (with both Harvey and Middlebrook suggesting that the presence of the two senior officers offering their own advice and opinions on the battalion's fight was likely a source of considerable distraction and irritation for the 3<sup>rd</sup>'s Lt. Col. Fitch), it further ensured that both the 1<sup>st</sup> Parachute Brigade and the 1<sup>st</sup> Airborne Division as a whole remained almost entirely bereft of the central direction that British units so depended upon – a situation that was only exacerbated when Urquhart's jeep was hit by a mortar round, leaving him without any means of contacting his own headquarters.<sup>261</sup> The radio breakdown, and Urquhart's determined but somewhat ill-considered response to it, thus ensured his division was effectively left headless through the entirety of the critical period of fighting on the 17<sup>th</sup>, contributing to the rather spasmodic, uncoordinated and directionless nature of the division's battle.

As bad as this initial disruption was to the overall plan – dependent as it was on the surprise effect of the initial rush to the bridges – matters of command only got worse for the 1<sup>st</sup> Airborne Division. Early on the 18<sup>th</sup>, as the fighting seesawed back and forth along Tiger route, Urquhart and Lathbury soon found themselves cut off by a German counterattack, with Lathbury being seriously wounded and left with a Dutch family to be captured a few days later, while Urquhart was pinned in the attic of a house for nearly 24 hours, keeping him away from his HQ at a critical juncture in his division's battle.<sup>262</sup> With the arrival of the division's second airlift on the afternoon of the 18<sup>th</sup>, bringing in the three fresh battalions of the 4<sup>th</sup> Parachute Brigade, along with two stray companies from the 1<sup>st</sup> Airlanding Brigade, the 1<sup>st</sup> Airborne's Division suddenly had available not only those newly arrived forces, but also the portion of the 1<sup>st</sup> Airlanding Brigade freed up from their defensive duties at the landing zones. As such, the division now had at its disposal a potentially powerful reserve force of five battalions to try to rescue its failing plan. Brigadier Philip Hicks of the 1<sup>st</sup> Airlanding Brigade, who had assumed command of the 1<sup>st</sup> Airborne Division in light of Urquhart's absence and feared death, and who had been receiving a steady flow of

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<sup>260</sup> Urquhart, *Arnhem*, pp. 39-40.

<sup>261</sup> Urquhart, *Arnhem*, pp. 45-46; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division, Annexure T: 1<sup>st</sup> Airborne Division Signals Report on Operation Market, 17<sup>th</sup> Sep 1944 to 26 Sep 1944*, p. 2; Harvey, *Arnhem*, p. 73; Middlebrook, *Arnhem 1944*, p. 137.

<sup>262</sup> Urquhart, *Arnhem*, pp. 61-66.

fragmentary reports of the growing struggle on the outskirts of Arnhem, soon dispatched the 2<sup>nd</sup> Battalion, The South Staffordshire Regiment (2<sup>nd</sup> South Staffs) from his own brigade, as well as the 11<sup>th</sup> Parachute Battalion from 4<sup>th</sup> Parachute Brigade, to proceed to Arnhem to link up with the 1<sup>st</sup> Parachute Brigade and try to make a renewed effort to push through to the 2<sup>nd</sup> Battalion force at the bridge.<sup>263</sup> However, Brigadier Hackett of the 4<sup>th</sup> Brigade, who apparently resented Hick's "seizure" of one of his battalions, as well as the fact that Hicks had been designated by Urquhart as third in the division's line of succession (after Lathbury), despite Hackett's seniority, dispatched the 11<sup>th</sup> Battalion, but effectively refused to allow the rest of his brigade to be sent into the growing fight on the edge of Arnhem, suggesting that Hicks had allowed the battle to become "grossly untidy."<sup>264</sup> Instead, Hackett chose to all but ignore the growing crisis in the effort to get a sizeable force through to Arnhem bridge and instead chose to stick to the objectives assigned to his division in the original operational plan, which was to support the defence of Arnhem by the 1<sup>st</sup> Parachute and 1<sup>st</sup> Airlanding Brigades by securing high ground to north of Arnhem which commanded the main road into the city, along which any German reinforcements were expected to arrive.<sup>265</sup> Hicks, uncertain in his new command responsibilities and apparently unwilling to assert his authority over the often volatile Hackett, chose simply to acquiesce in Hackett's decision.<sup>266</sup> Thus, Hackett sent his two remaining battalions, the 10<sup>th</sup> and the 156<sup>th</sup> Parachute (later joined by the 7<sup>th</sup> King's Own Scottish Borderers (7<sup>th</sup> KOSB), transferred from the 1<sup>st</sup> Airlanding Brigade in exchange for the 11<sup>th</sup> Parachute Battalion), well to the north of the main battle, trying once again to proceed down the

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<sup>263</sup> CAB 106/1078 *The South Staffordshires in the Battle of Arnhem* pp. 4,7-8; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division*, 18<sup>th</sup> September 1944; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division – Report on Operation "Market"*, Arnhem 17-26 Sept. 1944, 10<sup>th</sup> January 1945, pp. 9-10; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division – 1 Air Landing Bde – Operation Market*, 17<sup>th</sup> to 26<sup>th</sup> Sept 1944, Annexure O.2; WO 171/589 *War Diary HQ 1<sup>st</sup> Airlanding Brigade*, Appendix A - *Operation Market*, 18<sup>th</sup> September 1944; WO 171/1244 *War Diary 11<sup>th</sup> Battalion The Parachute Regiment*, Appendix A: *Account of Arnhem Battle* By Lt. J.E. Blackwood, September 18<sup>th</sup> 1944;

<sup>264</sup> WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division*, 18<sup>th</sup> September 1944; Harclerode, *Arnhem: A Tragedy of Errors*, p. 89; Powell, *The Devil's Birthday*, p. 110; Ryan, *A Bridge Too Far*, pp. 309-10.

<sup>265</sup> WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division*, Annexure C: *1<sup>st</sup> Airborne Division Op instruction No. 9 – Confirmatory Notes on GOC's Verbal Orders*, pp. 3-4; WO 171/594 *War Diary HQ 4<sup>th</sup> Parachute Brigade*, Appendix C: *Copy of Diary Kept by Brigadier J.W. Hackett, Commander, 4 Parachute Brigade*, 2<sup>nd</sup> October 1944, p. 2; Middlebrook, *Arnhem 1944*, pp. 248-49; Reynolds, *Sons of the Reich*, p. 32; Ryan, *A Bridge Too Far*, pp. 325-27.

<sup>266</sup> Urquhart, *Arnhem*, pp. 78-80; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division – Report on Operation "Market"*, Arnhem 17-26 Sept. 1944, 10<sup>th</sup> January 1945, pp. 10-11; Tugwell, *Arnhem: A Case Study*, pp. 40-41; Ryan, *A Bridge Too Far*, pp. 321-22.

“Leopard” route that the Reconnaissance Squadron and the 1<sup>st</sup> Battalion had found blocked by Krafft and Spindler the day before, thus diverting the majority of the available reserve force to an objective of minimal importance in light of the current situation.<sup>267</sup> Unsurprisingly, the 4<sup>th</sup> Parachute Brigade’s initial probing attacks on the evening of the 18<sup>th</sup> were swiftly brought to a halt by Kampfgruppe Spindler’s now reinforced blocking line, and a further attack on the 19<sup>th</sup> saw the 4<sup>th</sup> Brigade effectively shattered in an abortive assault on the German defences, now backed by light armour and flak guns, and by the subsequent retreat and close German pursuit back to the landing zones.<sup>268</sup>

At the same time, the reinforcements sent by Hicks joined up with the depleted battalions of the 1<sup>st</sup> Parachute Brigade on the edge of Arnhem. In the absence of any central plan for coordination beyond a hasty meeting between the COs early on the morning of the 19<sup>th</sup> and with two of the four battalions fresh off forced marches through the night and entering an unfamiliar situation, the subsequent attack quickly broke down into a series of uncoordinated and futile frontal assaults on the German lines. This attack was the 1<sup>st</sup> Airborne Division’s largest and final offensive thrust towards Arnhem, with four battalions taking part, but they swiftly found themselves under fire from three sides. With no clear commander of the overall force, the battalions proved entirely unable to coordinate their efforts or support one another. Like the 4<sup>th</sup> Brigade, these battalions, attacking largely on their own and in succession, without effective cooperation or support, were rapidly shredded by intense German fire. Suffering massive casualties and quickly being driven to cover in nearby buildings, they were subsequently routed by German counterattacks, with only a few tattered survivors reaching the main divisional area at Oosterbeek.<sup>269</sup> The level of disorganization and confusion in this attack was such that the forces of

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<sup>267</sup> WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division*, 19<sup>th</sup> September 1944; WO 171/589 *War Diary HQ 1<sup>st</sup> Airlanding Brigade, Appendix A - Operation Market*, 19<sup>th</sup> September 1944, p.2.

<sup>268</sup> WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division*, 19<sup>th</sup> to 21<sup>st</sup> September; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division – Report on Operation “Market”, Arnhem 17-26 Sept. 1944*, 10<sup>th</sup> January 1945, pp. 14-16; WO 171/594 *War Diary HQ 4<sup>th</sup> Parachute Brigade, Appendix C: Copy of Diary Kept by Brigadier J.W. Hackett, Commander, 4 Parachute Brigade*, 2<sup>nd</sup> October 1944, pp. 3-8; WO 171/1247 *War Diary 156<sup>th</sup> Battalion The Parachute Regiment, Appendix C: Account of Operation Market Garden*, 18<sup>th</sup> to 20<sup>th</sup> September 1944; WO 171/1323 *War Diary 7<sup>th</sup> (Galloway) Battalion The King’s Own Scottish Borderers*, 19<sup>th</sup> September 1944.

<sup>269</sup> CAB 106/1078 *The South Staffordshires in the Battle of Arnhem, Account of 11 Para Bn*, pp. 12-13; CAB 106/1078 *The South Staffordshires in the Battle of Arnhem, Account of 1 PARA*, p. 19-21; WO 171/393 *War Diary*

Kampfgruppe Spindler that faced it believed it was no more than a widespread infiltration effort, rather than a serious attack.<sup>270</sup>

These attacks were the last offensive actions on any scale to be undertaken by the 1<sup>st</sup> Airborne Division at Arnhem; with both the 1<sup>st</sup> and 4<sup>th</sup> Parachute Brigades, and much of the 1<sup>st</sup> Airlanding Brigade, effectively destroyed, the remnants of the division were henceforth reduced to clinging to a steadily shrinking perimeter around Oosterbeek and trying merely to survive long enough to be relieved (or evacuated, as it turned out).<sup>271</sup> Though General Urquhart had managed to escape from his “imprisonment” in Arnhem, and reached the Divisional HQ just before the attack went in, his efforts to first send a senior officer to oversee and coordinate the attack (who never arrived, and was never seen alive again), and later to call it off, came too late to either save the four battalions on the edge of Arnhem, or further their effort to reach the 2<sup>nd</sup> Battalion at the bridge, which succumbed to repeated German attacks on the 20<sup>th</sup>.<sup>272</sup>

Thus, it was not simply the failure of the 1<sup>st</sup> Airborne Division’s communications network and Urquhart’s prolonged absence from his headquarters that doomed the division’s offensive efforts in the operation’s crucial early days, but the fact that its various sub-units proved almost entirely unable to operate effectively without constant supervision and instruction. Without any firm central coordination, the division was never able to coordinate an attack by more than two battalions at a time, and even these did not coordinate closely, attacking separate sections of the German lines and being unable to effectively support one another. Moreover, Urquhart’s absence from his HQ on the 18<sup>th</sup> effectively wasted perhaps the best opportunity the division had to muster a sizeable force to assault into Arnhem and showed that his brigadiers (generally considered talented officers by most, at least in other circumstances) lacked the sense of initiative and tactical judgement necessary to modify a plan that was clearly failing to address the

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HQ 1<sup>st</sup> Airborne Division, 19<sup>th</sup> September 1944; WO 171/592 War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix B: Diary of Events, 1<sup>st</sup> Parachute Battalion, 19<sup>th</sup> September 1944, p. 2; CAB 106/1078 The South Staffordshires in the Battle of Arnhem, Account of 3 PARA, p. 20-21.

<sup>270</sup> BA/MA RS 3-9/45 Ia Tagesmeldung von Kampfgruppe Spindler an SS- Division Hohenstaufen, 19.9.1944.

<sup>271</sup> Urquhart, *Arnhem*, pp. 103-4; Middlebrook, *Arnhem 1944*, pp. 216, 324; Powell, *The Devil’s Birthday*, p. 166.

<sup>272</sup> Urquhart, *Arnhem*, pp. 81-85; WO 171/393 War Diary HQ 1<sup>st</sup> Airborne Division, 19<sup>th</sup> September 1944; WO 171/393 War Diary HQ 1<sup>st</sup> Airborne Division – 1 Air Landing Bde – Operation Market, 17<sup>th</sup> to 26<sup>th</sup> Sept 1944, Annexure O.2, p. 5; WO 171/589 War Diary HQ 1<sup>st</sup> Airlanding Brigade, Appendix A - Operation Market, 19<sup>th</sup> September 1944; Ryan, *A Bridge Too Far*, pp. 339-41.

prevailing circumstances. Had Urquhart been present to assemble the five fresh battalions made available by the arrival of the second lift into a proper striking force (effectively a reinforced 4<sup>th</sup> Parachute Brigade), and sent them to the support of the 1<sup>st</sup> and 3<sup>rd</sup> Battalions still fighting in the town, the division might have had its only reasonable chance of breaching Spindler's line, reaching the 2<sup>nd</sup> Battalion at the bridge and possibly establishing the strong perimeter around the bridgehead that their entire battle plan was predicated upon. To use an apt metaphor, the division's component units proved unable to "hang together" without their divisional commander's direct guidance, and so were hanged separately, defeated in detail by a still fairly thin German defensive line.

The British Army's penchant for centralized control meant that, deprived of its CO, the fighting capabilities of the 1<sup>st</sup> Airborne Division were effectively crippled throughout the critical phase of the operation. Though one can certainly find fault in the conduct of all four of the 1<sup>st</sup> Division's senior commanders at Arnhem, it is clear that the main source of their faults and difficulties was the doctrine in which they had been trained, which designated operational, and even a large degree of tactical, command as the exclusive province of senior formation commanders, leaving the bulk of the more junior officers, NCOs, and men – those fighting on the "sharp end" - without the training and skills they needed to fight their own battles without the closest supervision from above. Though such control could be maintained in standard set-piece battles, and often proved relatively effective there, it was entirely incompatible with the conditions inherent to an airborne operation – particularly one opposed by a foe so skilled in operating under those same conditions. In face of unexpected resistance, the division's initial efforts quickly begin to peter out and fall into confusion as events diverged from the set plan – resulting in a "creeping paralysis", as Ryan termed it, across the entire force.<sup>273</sup>

Overall, though the combat doctrine in use in the British Army of 1944, which was focused on centralized control, massed firepower, and carefully organized set-piece battles, had proven quite effective in Normandy, it was entirely unsuitable for the conditions and demands of Operation Market Garden. Montgomery's bold offensive plan required a level of speed, aggression, initiative, and flexibility

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<sup>273</sup> Ryan, *A Bridge Too Far*, p. 211.

that his forces simply had not been prepared for by either their training or their experience under his command. In seeking to exploit what he saw as a fleeting opportunity to win the war at a single stroke, Montgomery abandoned the cautious, meticulous fighting methods that had served him and his commands so well since El Alamein in favour of a hastily organized rush to the Rhine for which his troops proved ill-suited. Any success the operation might have achieved was entirely dependent upon the Germans not putting up any significant resistance – failing that, the forces of the 2<sup>nd</sup> Army and the 1<sup>st</sup> Allied Airborne Army found themselves in a confused, fast moving battle in close-quarters, where initiative among junior commanders and small-unit tactical training – two of the British Army’s most significant weaknesses, and some of the Germans greatest strengths - were at a premium. Though the units of these armies rose to this unfamiliar challenge as well as they could – as is clearly shown by how near they came to success in the end – and fought uniformly hard, if not always particularly well, they all too often found themselves at a critical disadvantage in the fighting that ensued, all but ensuring critical tactical failures or delays at key points that completely disrupted a battle plan entirely dependent upon both great haste, and a near perfect rate of success in securing the vital objectives.

In the end, it was hardly a reasonable course of action for a commander to suddenly demand his forces to completely alter the most basic aspects of the way in which they fought battles on the fly – particularly when those methods had proven so effective for them to date. Historian Stephen Hart has observed that Montgomery’s ability to perceive, understand, and account for the limitations of his own forces - to grasp and plan for what was actually achievable in a practical sense - was typically one of his greatest strengths as a commander. In the case of Operation Market Garden, however, this skill apparently abandoned him, bringing about the only notable defeat of his career.<sup>274</sup>

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<sup>274</sup> Hart, *Montgomery and “Colossal Cracks,”* pp. 8-9.

## **CHAPTER 6: THE ROLE OF BRITISH FIREPOWER DOCTRINE IN OPERATION MARKET GARDEN**

As has already been touched upon in previous chapters, another central element of the combat doctrine employed by the 21<sup>st</sup> Army Group in Northwest Europe – a doctrine that had been in use across the British Army since the Battle of El Alamein in October 1942 – was the deployment of overwhelming levels of firepower, particularly through massed artillery and air strikes, to overcome enemy resistance. By the summer of 1944, the British Army had carefully honed its ability to rapidly and accurately direct the efforts of its artillery and supporting tactical air forces onto hostile targets of all types in both attack and defence, giving them an unparalleled source of destructive combat power. Allied artillery and tactical airpower have often been credited by observers – both contemporary and since - as having been by far the most effective contributors to the Allied victory in France, playing the primary role in the steady attrition of German strength that eventually enabled the decisive breakout and the subsequent German rout.

However, despite their central role in the Normandy fighting, during Operation Market Garden the Allied forces proved almost entirely unable to bring these critical sources of firepower to bear effectively on the German forces, leaving their infantry and tank units to struggle on without the lavish level of support upon which they had long counted to help win their battles. Though the 21<sup>st</sup> Army Group still mustered most of the massive assemblage of artillery pieces that had blasted their way through Normandy, and was still ostensibly supported by the numerous fighter bombers of the 83<sup>rd</sup> Group of the RAF's 2<sup>nd</sup> Tactical Air Force, a combination of flawed planning and a doctrine for employing that firepower that proved poorly suited to the circumstances faced ensured that the Allied airborne forces and the 2<sup>nd</sup> Army entered Holland with their greatest weapons effectively blunted.

As with their tactical and command doctrine, the views of the British Army upon the role and employment of firepower were shaped largely by their experience of the First World War. As previously stated, after the catastrophic experiences with massed and poorly supported infantry attacks in 1914-16, by the last years of the war, most British and Commonwealth offensive operations were first and foremost artillery operations, centred around increasingly heavy and elaborate fire plans intended to destroy enemy

strongpoints, suppress their defending troops, and allow the attacking infantry and tanks to advance onto their objectives with a relative minimum of casualties. This concept of warfare centered around firepower, rather than the mass and raw numbers of infantry, became even more prominent among British military leaders in the inter-war period, as they were increasingly unwilling to risk losses on the scale of the First World War. As such, firepower increasingly came to be seen as the primary means by which battles should be won.<sup>275</sup>

Based upon the this First World War experience, and their concepts of command, British interwar doctrine also called for control of this firepower to be centralized as much as possible to maximize the ability of forces to concentrate and coordinate fire plans in support of their attacking elements.<sup>276</sup> Thus, the great bulk of the British Army's firepower in the 1930s and 40s was concentrated in the field regiments of the Royal Artillery assigned to the various divisions, and in the assortment of field, medium, and heavy regiments placed under the control of corps and army headquarters; by the summer of 1944, about half of the total British artillery strength was concentrated in units controlled at the corps level or above.<sup>277</sup>

The infantry, on the other hand, was increasingly deemphasized within interwar doctrine as a source of effective firepower generation on the offensive, increasingly being relegated solely to the role of assault and occupation of ground.<sup>278</sup> The winning of the firepower battle and the suppression of enemy defensive fire to enable that assault thus became more and more the exclusive province of the artillery, with infantry relying on the cover of barrages, rather than their own fire and movement tactics, to reach enemy lines intact.<sup>279</sup> Thus by the time World War Two broke out, the British Army's deployment of firepower, in both theory and practice was largely based around centrally controlled artillery fire.

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<sup>275</sup> French, "Doctrine and Organization in the British Army," pp. 498-99, 506.

<sup>276</sup> British General Staff, *Field Service Regulations, Vol. II. Operations – General (1935)*, Section 5, p. 9; French, *Raising Churchill's Army*, p. 27.

<sup>277</sup> French, *Raising Churchill's Army*, pp. 39-40; Niklas Zetterling, *Normandy 1944: German Military Organization, Combat Power and Organizational Effectiveness* (Winnipeg, MN: J.J. Federowicz, 2000), p. 22.

<sup>278</sup> British General Staff, *Field Service Regulations, Vol. II. Operations – General (1935)*, Section 62, p. 124.

<sup>279</sup> British General Staff, *Field Service Regulations, Vol. II. Operations – General (1935)*, Section 63, pp. 128-29; French, *Raising Churchill's Army*, pp. 89-90.

The experience of the early years of the Second World War only intensified this tendency, as British tank and infantry units all too often found themselves outclassed by their better trained and equipped German opponents and thus relied upon their supporting artillery to make up the difference. From the famous “1,000 gun barrage” at El Alamein onward, Field Marshal Montgomery and the British Army as a whole placed an ever-increasing reliance upon the steadily growing strength and proficiency of their artillery arm to make up for the continuing shortcomings of their infantry and armoured forces and win their battles.<sup>280</sup> Throughout the remainder of the Mediterranean campaign Montgomery became increasingly focused on ensuring his attacks had a truly “luxurious” level of artillery support, massing weapons and stockpiling large quantities of ammunition before any significant offensive.<sup>281</sup> This Mediterranean experience thus crystalized the leading role of artillery within British doctrine. This modified doctrine began to filter back into the doctrinal manuals and training regimes of the British Home Forces, ensuring that when Montgomery arrived in England in January 1944 to assume command of what would soon become the 21<sup>st</sup> Army Group, his efforts to fully standardize this artillery-centric doctrine – which historian Stephen Hart, drawing upon a well-known statement by Montgomery, has aptly termed the “Colossal Cracks” doctrine - fell on a very receptive audience of troops that had already begun training along those lines.<sup>282</sup>

The enthusiasm with which the 21<sup>st</sup> Army Group adopted the “Colossal Cracks” doctrine was also driven by the fact that Montgomery and his fellow commanders were increasingly aware that Britain was facing a growing crisis of manpower after 4 ½ years of war. By early 1944, virtually all able-bodied men in the country had been mobilized to either the front-line forces or critical industries and so, unlike the US or USSR, almost no reserves of trained manpower remained in Britain after Operation Overlord was

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<sup>280</sup> French, *Raising Churchill's Army*, pp. 256-58; Montgomery, *El Alamein to the River Sangro/Normandy to the Baltic*, p. 24.

<sup>281</sup> Hart, *Montgomery and "Colossal Cracks,"* pp. 92-93.

<sup>282</sup> Hart, *Montgomery and "Colossal Cracks,"* pp. 2, 8-10, 79-80.

launched in June.<sup>283</sup> The future supply of replacements to the field forces would thus be largely limited to whatever new conscripts came of age each year or, more drastically, from the cannibalization of existing formations to replace losses in others; the 21<sup>st</sup> Army Group was in fact forced to disband two of its combat divisions – the 59<sup>th</sup> and 50<sup>th</sup> Infantry Divisions - for this purpose by end of 1944.<sup>284</sup> This critical shortage of manpower ensured a further degree of impetus for a battle doctrine that focused upon spending materiel rather than men; as Montgomery's chief intelligence officer, Edgar "Bill" Williams, put it, the British Army of 1944 preferred to "let metal do it rather than flesh."<sup>285</sup> A strategy centred around the expenditure of firepower rather than manpower also served a useful political purpose for the British government, in that it would limit any significant reduction of the forces that Britain was contributing to the conflict and thus maintain its degree of political influence over the establishment of the post-war order - something that was already declining in the face of the growing American contribution to the war.<sup>286</sup>

Beyond the growing effectiveness and prominence of the Royal Artillery, the North African campaign had also seen the tactical air forces of the Royal Air Force (RAF) become an increasingly important source of additional firepower for the British ground forces. Upon his arrival in the Western Desert, Montgomery and his RAF counterparts in the Desert Air Force worked to develop a very close cooperative relationship, with their HQs co-located and all operational plans being prepared jointly by the two services.<sup>287</sup> Montgomery himself frequently stated his view that the RAF were an integral and indispensable part of his operations in Africa and beyond, and asserted that modern ground operations were entirely inseparable from the supporting efforts of air forces; an assertion that Hart argues has been

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<sup>283</sup> French, *Raising Churchill's Army*, pp. 242-46; Hart, *Montgomery and "Colossal Cracks,"* pp. 50-51, 57-58; Peaty, "Operation MARKET GARDEN: The Manpower Factor," pp. 59-60; Murray, "British Military Effectiveness in the Second World War," pp. 96-97.

<sup>284</sup> Peaty, "Operation MARKET GARDEN: The Manpower Factor," p. 59; Murray, "British Military Effectiveness in the Second World War," p. 100.

<sup>285</sup> Hart, *Montgomery and "Colossal Cracks,"* p. 41.

<sup>286</sup> Hart, *Montgomery and "Colossal Cracks,"* pp. 62-65.

<sup>287</sup> Montgomery, *El Alamein to the River Sangro/Normandy to the Baltic*, p. 10; French, *Raising Churchill's Army*, p. 259.

largely proven in the decades since.<sup>288</sup> Thus, most 8<sup>th</sup> Army operations in North Africa, Sicily, and Italy from El Alamein onwards were characterized by a lavish scale of tactical air support, with fighter-bombers and medium bombers striking at both Axis front line positions and lines of communications almost continuously and in large numbers in support of the ground battle.<sup>289</sup>

Perhaps most usefully for future operations, the 8<sup>th</sup> Army and the Desert Air Force worked out particularly effective systems of ground to air communications for directing close air support, using “control cars” on the ground manned by specially trained Royal Air Force personnel to communicate by radio directly with aircraft orbiting the battlefield at the ready in “cab ranks” and vector them directly onto specific targets with a much greater accuracy, and lower risk of friendly fire, than had previously been possible.<sup>290</sup> This development made strikes by fighter-bombers a standard part of British ground battles, allowing them to be called down and directed much like artillery fire, greatly boosting the potential firepower than any given unit could have at its command. Thus, by the end of the campaign in the Mediterranean, artillery and airpower had clearly become the central elements of British operational doctrine and practice. Though much still remained up to the efforts of infantrymen and tankers, British battles generally turned on the ability of those supporting arms to win the firefight and suppress and disrupt Axis defences sufficiently to allow the “closing arms” to effectively assault, drive out, and defeat the enemy.

The British campaign in Normandy continued this policy of reliance upon overwhelming support fire from artillery (including the heavy guns of the Allied naval forces stationed off-shore) and air-power (including not only the tactical forces, but also frequent “carpet bombings” of German front line positions by the heavy bombers of RAF Bomber Command and the US 8<sup>th</sup> Air Force). Accounts of the fighting, particularly from the German side, heavily emphasized the prominent role of this firepower in the

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<sup>288</sup> Montgomery, *El Alamein to the River Sangro/Normandy to the Baltic*, pp. 5, 145; Horrocks, *A Full Life*, p. 122; Hart, *Montgomery and “Colossal Cracks,”* p. 119.

<sup>289</sup> Lewis H. Brereton, *The Brereton Diaries: The War in the Air in the Pacific, Middle East and Europe, 3 October 1941 – 8 May 1945* (New York: Da Capo Press, 1976), pp. 294-95.

<sup>290</sup> Montgomery, *El Alamein to the River Sangro/Normandy to the Baltic*, p. 64; Brereton, *The Brereton Diaries*, pp. 142-43; Dupuy, *The Evolution of Weapons and Warfare*, p. 246; French, *Raising Churchill’s Army*, pp. 236-38.

Normandy fighting, with numerous German eyewitnesses describing the paralytic effects of such heavy bombardments, which left units unable to do much more than cower in whatever cover they can find and often left them physically stunned and badly demoralized, even if actual casualties were limited.<sup>291</sup>

Though the Germans often derided Allied infantry and tank forces as being timid and unwilling to risk engaging in close combat, they almost invariably expressed a wary respect and admiration for the effectiveness of their opponents' artillery and tactical air power.<sup>292</sup> Though the Germans naturally had good reason to explain away their defeats as being due to overwhelming Allied material superiority – an “unfair” fight, as it were – even allowing for a degree of exaggeration it seems clear that this firepower played a critical role in the Allied ability to win in Normandy. The superiority of Allied artillery and air power was something the Wehrmacht of mid-1944 simply could not match in a stand-up battle of attrition. The apparent “cowardice” displayed by Allied infantry and armoured forces was simply the result of the Allies refusing to wage their battles in the way the Germans would have wanted them to; as experience had shown that they were generally outclassed by the Germans in those categories, it was entirely reasonable for them to wield them cautiously, while placing the main weight of their efforts in areas in which they held the clear advantage.

Thus, by the time of the invasion of Holland in September 1944, Allied forces rather naturally took for granted the scale of fire support that had paved their way through Normandy, expecting that at any given time, in any situation, they could call down a blizzard of artillery fire or aerial rockets and bombs upon any German force that dared to oppose them. Unfortunately for them, the Allied forces proved almost entirely unable to bring this weight of fire effectively to bear in Market Garden, leaving the infantry and armoured formations of the 1<sup>st</sup> Allied Airborne and 2<sup>nd</sup> British Armies to struggle on with only a fraction of the firepower that had been so vital in the Normandy fighting.

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<sup>291</sup> Stephen G. Fritz, *Frontsoldaten: The German Soldier in World War II* (Lexington: University Press of Kentucky, 1995), pp. 61-63; Tieke, *In the Firestorm of the Last Years of the War*, pp. 86-89, 96-97.

<sup>292</sup> French, *Raising Churchill's Army*, pp. 92-93; Hart, *Montgomery and "Colossal Cracks,"* pp. 67-68; Murray, “British Military Effectiveness in the Second World War,” p. 127; Fritz, *Frontsoldaten*, p. 61.

Perhaps most critical, in light of the British Army's artillery-centric fighting methods, was the relative paucity of artillery support available to the 1<sup>st</sup> Airborne Division at Arnhem and Oosterbeek. Since their development in the 1930s, a relative lack of firepower had been an inherent weakness of airborne infantry forces. Given that they had to be transported entirely by air, using the relatively small and limited-capacity transport aircraft and gliders of the 1930s and 40s, they naturally could not be outfitted with the full complement of artillery pieces and towing vehicles that could be fielded by a conventional foot or motorized infantry division. Though this situation had improved somewhat by 1944 in comparison to earlier airborne efforts, as improved aircraft and cargo glider designs were brought into service, allowing for a division to fly in with a limited complement of artillery and other support weaponry, airborne forces generally remained very weak in this category in comparison to standard ground units. A British airborne division in 1944 fielded a single Airlanding Light Artillery Regiment (the, 1<sup>st</sup> Regiment, in the case of the 1<sup>st</sup> Airborne Division), which comprised three eight-gun batteries of modified American 75mm pack howitzers, for a total of twenty-four pieces – with a single battery normally being assigned to support each of the division's three infantry brigades.<sup>293</sup> Each howitzer was landed with its crew and a towing jeep in an Airspeed Horsa – a heavy British glider with a cargo capacity of over 7,000 lbs.<sup>294</sup> At Arnhem, two of the 1<sup>st</sup> Airlanding Light Artillery Regiment's batteries were landed in the first lift on September 17<sup>th</sup>, with the remaining battery arriving in the afternoon of the 18<sup>th</sup>, with twenty-three of the twenty-four howitzers flown in being landed and deployed intact.<sup>295</sup>

Though the deployment of these guns was a considerable feat for the airborne logistics of 1944, it still left airborne divisions with only a fraction of the artillery firepower that an infantry division enjoyed. The standard British infantry division of 1944 fielded three field regiments of twenty-four guns each, for a total of seventy-two tubes. Thus, in terms of raw numbers, an infantry division fielded three times as many guns as an airborne division, but the relative firepower situation was actually considerably worse

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<sup>293</sup> Middlebrook, *Arnhem 1944*, pp. 34-35; Reynolds, *Sons of the Reich*, p. 109.

<sup>294</sup> Gordon L. Rottman, *World War II Glider Assault Tactics* (Oxford: Osprey Publishing, 2014), pp. 20-22; Myatt, *The British Infantry 1660-1945*, p. 210.

<sup>295</sup> WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division*, "British Guns Landed," September 1944; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division*, Annexure R: Report by CRA 1 Airborne Division on Operation Market, p. 8.

than that, as each of a field regiment's guns was a considerably more powerful and effective weapon than the light pack howitzers of an airborne artillery regiment. The standard British field gun in use with the field regiments was the 25-pounder gun/howitzer, which could fire its 25-lb high explosive (HE) shells, out to a maximum range of 13,400 yards; by comparison, the 75mm howitzer fired a 14.7lb HE shell out to a maximum of 9,610 yds. An infantry division could thus fire a weight of 1,800 lbs of shells in a single full salvo from its artillery regiments, more than five times the 352.8 lb "broadside" weight that an airborne division's single light regiment could muster.<sup>296</sup> As such, the 1<sup>st</sup> Airborne Division was clearly well short of the high volume and reach of artillery firepower that was so central to British infantry doctrine, a standard that it is well worth noting had by no means been a guarantee of success for British infantry divisions in Normandy, and could arguably be said to be something of a "minimum" necessary for coping with the tactical advantages enjoyed by the Germans. Historian Maurice Tugwell describes an airborne division as a "rapier" as compared to the "mace" that was a standard British infantry division – and British doctrine was hardly conducive to skilled "fencing."<sup>297</sup>

In spite of its limitations, the 1<sup>st</sup> Airborne Division's 1<sup>st</sup> Airlanding Light Artillery Regiment did the best it could, and provided valuable service throughout the battle of Arnhem. Despite the need to deploy and dig in its weapons, as well as to set up communications networks, both of the two batteries landed on the 17<sup>th</sup> - at 1315 and 1345 - were conducting their first fire missions by 1700 that evening – a fairly impressive performance.<sup>298</sup> The Light Regiment's radio operators also proved considerably more successful in maintaining communications than their brethren with the infantry, with contact being kept fairly reliably throughout the battle between the three batteries and their forward observers operating with each of the infantry brigades (two with each battalion), though temporary breaks were still a far from an uncommon hindrance to their efforts; early on the 18<sup>th</sup>, for example, the 3<sup>rd</sup> Parachute Battalion lost heavily in the face of a sizeable German counterattack when their forward observers were unable to

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<sup>296</sup> Ian V. Hogg, *British & American Artillery of World War Two* (London: Greenhill Books, 2002), pp. 32-33, 51-53; French, *Raising Churchill's Army*, p. 89.

<sup>297</sup> Tugwell, *Arnhem: A Case Study*, p. 19.

<sup>298</sup> WO 171/1016 *Original War Diary of 1<sup>st</sup> A/L Light Regt RA for the Month of September 44*, 17<sup>th</sup> September 1944.

contact their battery to call down fire support.<sup>299</sup> Even the isolated 2<sup>nd</sup> Parachute Battalion force at the bridge was able to call down fire from its supporting 3rd Battery from the point at which communications were established on the morning of the 18<sup>th</sup> after some initial difficulties, right up until the force was overrun on the 20<sup>th</sup>.<sup>300</sup>

However, the simple fact is that, despite the 1<sup>st</sup> Airlanding Light Regiment's best efforts, with each of the division's three brigades – plus the bridge force - fighting separate battles across a wide area around Arnhem throughout the critical offensive phase, the gunners were never able to effectively mass their fire enough to effectively suppress the German defences and allow the infantry battalions to break through. On the critical first day of the operation, the 1<sup>st</sup> Parachute Brigade's offensive could only reliably expect the support of a single eight-gun battery for its three battalions; though the operational orders technically allowed for each brigade to call in additional support to that from their single assigned battery, the 1<sup>st</sup> Airlanding Brigade frequently called upon the Light Regiment to support its thinly stretched lines along the western edge of the landing zones against German probes throughout the evening and night of the 17<sup>th</sup>, ensuring that the two batteries landed were unable to concentrate their efforts in support of the struggling attack to the east.<sup>301</sup>

From the 18<sup>th</sup>, even with the landing of the final battery of the 1<sup>st</sup> Light Regiment in the second lift, the dispersion of the division's fire actually became even worse, as, with the 1<sup>st</sup> and 4<sup>th</sup> Parachute Brigades fighting separate battles en route to Arnhem, in addition to the needs of the 1<sup>st</sup> Airlanding Brigade to the west and the separate force at the bridge - which maintained a near monopoly on the efforts

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<sup>299</sup> WO 171/393 War Diary HQ 1<sup>st</sup> Airborne Division, Annexure R: Report by CRA 1 Airborne Division on Operation Market, p. 3; WO 171/393 War Diary HQ 1<sup>st</sup> Airborne Division, Annexure T: 1<sup>st</sup> Airborne Division Signals Report on Operation Market, 17<sup>th</sup> Sep 1944 to 26 Sep 1944, RA Communications p. 1; WO 171/592 War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix A: Operation "Market", Story of 1 Parachute Brigade, Consolidated Report by Brigadier Lathbury, 31<sup>st</sup> October 1944, p. 6; Harclerode, *Arnhem: A Tragedy of Errors*, p. 168.

<sup>300</sup> Frost, *A Drop Too Many*, p.221; Urquhart, *Arnhem*, pp. 67,99; WO 171/592 War Diary HQ 1<sup>st</sup> Parachute Brigade, Operation Market: Outline of Events, 1<sup>st</sup> Parachute Brigade, p. 4; WO 171/1016 Original War Diary of 1<sup>st</sup> A/L Light Regt RA for the Month of September 44, 17<sup>th</sup>, 18<sup>th</sup>, and 20<sup>th</sup> September 1944.

<sup>301</sup> WO 171/393 War Diary HQ 1<sup>st</sup> Airborne Division, Annexure C: 1<sup>st</sup> Airborne Division Op instruction No. 9 – Confirmatory Notes on GOC's Verbal Orders, 6<sup>th</sup> September 1944, p. 1-3; WO 171/393 War Diary HQ 1<sup>st</sup> Airborne Division, 1<sup>st</sup> Parachute Brigade Operational Order No. 1, Annexure D, 13<sup>th</sup> September 1944, p. 5; Ryan, *A Bridge Too Far*, p. 276.

of the 3<sup>rd</sup> Battery due to their particularly dire situation - only a handful of guns would be available to engage any given target, and units calling for fire often found the Light Regiment too busy to fulfill their requests at critical junctures.<sup>302</sup> For example, during the critical final attack on the morning of the 19<sup>th</sup>, despite the fact that the Light Regiment had been made aware of the impending effort and had sent out liaison officers and additional forward observers to maximize their ability to provide support, what fire they were able to muster proved entirely incapable of suppressing the small arms, machine gun, and mortar fire of the German defenders, ensuring that the advancing battalions walked into a veritable “hurricane” of fire that all but wiped them out.<sup>303</sup> The fact that both the 4<sup>th</sup> Parachute and 1<sup>st</sup> Airlanding Brigades were also heavily engaged at that same time as the 1<sup>st</sup> Parachute Brigade meant that, inevitably, critical gaps in the division’s fire support began to appear; the 4<sup>th</sup> Brigade’s attack on the high ground north of Arnhem, and their subsequent hard-pressed retreat back to the perimeter, was left almost entirely without artillery support, contributing to both their defeat and heavy losses.<sup>304</sup>

During the ensuing “siege” of the Oosterbeek perimeter that formed in the wake of the defeat of the 1<sup>st</sup> Airborne Division’s offensive on the 19<sup>th</sup>, the Light Regiment’s effectiveness was degraded still further by the fact that the retreat of the defeated infantry brigades left its gun positions only a short distance behind the patchwork front line; the Light Regiment’s commander, Lieutenant-Colonel William Thompson, had in fact played a significant role in halting the rout on the afternoon of the 19<sup>th</sup>, establishing a roadblock on the road just in front of his gun line to halt and rally the defeated paratroops and glider men.<sup>305</sup> Because of this development, the Light Regiment’s gunners spent the remainder of the battle dedicating a considerable portion of their efforts to defending their own gun positions with direct fire from the howitzers and their personal small arms – efforts which naturally further reduced the support

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<sup>302</sup> WO 171/592 *War Diary HQ 1<sup>st</sup> Parachute Brigade, Operation Market: Outline of Events, 1<sup>st</sup> Parachute Brigade, Appendix A: Diary of Events, 1 Para Bde HQ, Monday, 18<sup>th</sup> September 1944*, p. 4.

<sup>303</sup> WO 171/1016 *Original War Diary of 1<sup>st</sup> A/L Light Regt RA for the Month of September 44*, 19<sup>th</sup> September 1944.

<sup>304</sup> WO 171/1016 *Original War Diary of 1<sup>st</sup> A/L Light Regt RA for the Month of September 44*, 19<sup>th</sup> September 1944; Harvey, *Arnhem*, p. 101.

<sup>305</sup> WO 171/1016 *Original War Diary of 1<sup>st</sup> A/L Light Regt RA for the Month of September 44*, 19<sup>th</sup> September 1944; WO 171/1016 *War Diary 1<sup>st</sup> Airlanding Light Regiment RA, Report by Lt. Col. Thompson*, p.1.

they could provide to the infantry along the rest of the hard pressed perimeter.<sup>306</sup> Furthermore, the Regiment's losses in this fighting were such that it was soon forced to withdraw some of its forward observers from the infantry brigades to keep its howitzers crewed.<sup>307</sup> In the final days of the siege, the Light Regiment was frequently forced to fend off enemy tanks with armour-piercing shells fired over open sights and on the afternoon of the 25<sup>th</sup>, several of its gun positions were even temporarily overrun by a German attack.<sup>308</sup>

With the already badly overtasked Light Regiment being steadily reduced in effectiveness throughout the battle, only the fact that its radio operators had managed to establish radio contact with the command network of XXX Corps' 64<sup>th</sup> Medium Artillery Regiment early on the 21<sup>st</sup> ensured the survival of the Oosterbeek perimeter.<sup>309</sup> The 64<sup>th</sup> Regiment began firing concentrations in support of the perimeter from its positions near Nijmegen shortly after 1900 that same day, operating under the direction of the 1<sup>st</sup> Light Regiment's remaining forward observers on the perimeter, and was soon joined in this task by several other XXX Corps field and medium regiments. This artillery fire, though fired at extreme range, and with an ammunition supply limited by the frequent cuts in XXX Corps' lines of communication, was cited by most observers in the 1<sup>st</sup> Airborne Division as being instrumental in the division's ability to hold the line long enough to be evacuated, breaking up several major German assaults and preventing them from ever concentrating a sufficiently strong force to overrun the perimeter, despite the much depleted

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<sup>306</sup> WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division, Annexure R: Report by CRA 1 Airborne Division on Operation Market*, pp. 5-6. WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division, Annexure R, Part II: Conclusions with Regards to Future Operations*, p. 2; WO 171/1016 *Original War Diary of 1<sup>st</sup> A/L Light Regt RA for the Month of September 44*, 21<sup>st</sup> to 24<sup>th</sup> September 1944; WO 171/1016 *War Diary 1<sup>st</sup> Airlanding Light Regiment RA, Report by Lt. Col. Thompson*, p. 3.

<sup>307</sup> WO 171/1016 *Original War Diary of 1<sup>st</sup> A/L Light Regt RA for the Month of September 44*, 22<sup>nd</sup> September 1944.

<sup>308</sup> CAB 106/1078 *The South Staffordshires in the Battle of Arnhem*, p. 33; WO 171/1016 *Original War Diary of 1<sup>st</sup> A/L Light Regt RA for the Month of September 44*, 25<sup>th</sup> September 1944.

<sup>309</sup> CAB 106/1078 *The South Staffordshires in the Battle of Arnhem, Account of Thompson's Establishment of Contact with XXX Corps Artillery on Thursday the 21<sup>st</sup>*, p. 36; Urquhart, *Arnhem*, pp. 121-22; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division*, 21<sup>st</sup> September 1944; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division – 1 Air Landing Bde – Operation Market, 17<sup>th</sup> to 26<sup>th</sup> Sept 1944, Annexure O.2*, 21<sup>st</sup> September; CAB 106/1054 *A Short History of 30 Corps in the European Campaign 1944-1945*, p. 36.

strength of the defenders.<sup>310</sup> General Urquhart, in particular, despite his general frustration with the inability of XXX Corps to reach his troops on time, later requested that the men of the 64<sup>th</sup> Medium Regiment be allowed to display the Airborne Forces' "Pegasus" patch on their uniforms, as honorary members, for their efforts – a request that was later denied by a British high command eager to forget the entire Arnhem affair.<sup>311</sup>

Overall, the efforts and the fate of the 1<sup>st</sup> Airborne Division at Arnhem seem to clearly indicate the critical role of heavy artillery support in British infantry operations. With only the very limited artillery support provided by their own 1<sup>st</sup> Airlanding Light Regiment from the 17<sup>th</sup> to the 19<sup>th</sup>, the infantry of the 1<sup>st</sup> Airborne Division were almost entirely unsuccessful in their offensive efforts against the German forces holding Arnhem, while, with the more substantial support of the advance artillery of XXX Corps from the 20<sup>th</sup> to the 25<sup>th</sup>, the tattered remnants of the division managed to successfully hold their tiny perimeter against German forces that increasingly outnumbered them by a wide margin. Even the division's eventual evacuation across the Lower Rhine on the night of the 25<sup>th</sup>/26<sup>th</sup> was only made possible by the intense barrier barrages fired by XXX Corps all around the perimeter, which kept the Germans pinned down effectively enough that most did not even realize the airborne troops had left until the next morning. Given the central role that lavish artillery support had had in most British and Allied successes to date, it seems (in hindsight at least), an extremely dubious proposition to send such a lightly equipped division into such an exposed and vulnerable position; when surprise failed, the 1<sup>st</sup> Airborne Division simply lacked the artillery firepower that British tactics relied upon to enable infantrymen to advance in the face of resistance.

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<sup>310</sup> WO 171/393 War Diary HQ 1<sup>st</sup> Airborne Division, Annexure R: Report by CRA 1 Airborne Division on Operation Market, pp. 7-8; WO 171/393 War Diary HQ 1<sup>st</sup> Airborne Division, Annexure R: Report by CRA 1 Airborne Division on Operation Market, Appendix C to Part I:30 Corps Artillery Support, p. 1-2; WO 171/594 War Diary HQ 4<sup>th</sup> Parachute Brigade, Appendix C: Copy of Diary Kept by Brigadier J.W. Hackett, Commander, 4 Parachute Brigade, 2<sup>nd</sup> October 1944, pp. 8-9; WO 171/589 War Diary HQ 1<sup>st</sup> Airlanding Brigade, Appendix A - Operation Market, 23<sup>rd</sup> and 24<sup>th</sup> September 1944; Urquhart, *Arnhem*, pp. 123, 127; WO 171/393 War Diary HQ 1<sup>st</sup> Airborne Division – Report on Operation "Market", Arnhem 17-26 Sept. 1944, 10<sup>th</sup> January 1945, pp. 21, 23-24, 46.

<sup>311</sup> Urquhart, *Arnhem*, p. 183; WO 171/393 War Diary HQ 1<sup>st</sup> Airborne Division, Annexure P: Letter from Urquhart to CO of 64<sup>th</sup> Medium Regiment, 27<sup>th</sup> September 1944.

Though it possessed the full range of artillery support that was so lacking in the 1<sup>st</sup> Airborne Division, XXX Corps' near complete tactical dependence upon this support for offensive power also proved to be a severe hindrance to their effectiveness during Operation Market Garden. Despite the fact that the Market Garden plan called for a fast-moving deep penetration and exploitation mission by the armoured and motorized columns of XXX Corps, the corps remained almost entirely bound by the combat methods dictated by its doctrine, in which it had trained and operated over the past few years. Despite the high level of firepower that the armoured regiments within British armoured divisions possessed in 1944, a combination of habit (dating from experiences in the desert war in 1941-42, when for much of the campaign they fielded much less capable tanks than the American-built Sherman tank that was standard issue to British armoured units by mid-1944) and the continued vulnerability of most Allied tanks to German anti-tank guns and infantry projectors, ensured that British tankers remained almost as dependent upon artillery support as their infantry counterparts.<sup>312</sup> Throughout the campaign, when faced with resistance of any serious scale, the leading Guards Armoured Division generally chose to pull back, deploy its artillery and batter the opposition into submission, rather than trying to advance under cover of the fire of its own tanks and motorized infantry.

To be fair to the British tankers, this tendency was exacerbated by the terrain that confronted them throughout the operational area. This terrain – described in detail in pre-operation reports and thus hardly a surprise to British planners – consisted largely of typically flat, muddy Dutch polder land, crisscrossed with dykes and irrigation ditches as well as scattered woods and orchards and was thus largely impassable to Allied tanks (German tanks, most of which had wider tracks and thus lower ground pressure, seem to have fared a bit better). The Allied vehicle columns were thus almost entirely restricted to the single main road, which, for considerable parts of its length, was embanked about six feet above the surrounding terrain and bordered by deep ditches, leaving vehicles both unable to maneuver off it, and entirely exposed to any anti-tank fire from the surrounding area.

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<sup>312</sup> Place, *Military Training in the British Army 1940-1944*, p. 114.

As such, between their doctrine and training and the difficult circumstances they faced, it is hardly surprising that the Guards Armoured Division's general plan was to bludgeon their way through any opposition encountered, despite the mission's need for speed. Given the division's frontage of only a single tank, and the near complete absence of any scope for maneuver, artillery firepower was naturally viewed to be the best tool for breaking through German defences. It was for this reason that the Guards Armoured Division was assigned a strong complement of extra artillery from the corps reserves for the duration of the operation, a further seven field and three medium regiments in addition to their own three motorized field regiments.<sup>313</sup>

The decision of the Guards Armoured Division to halt their initial advance almost immediately after it began and repeat their preliminary barrage in the face of German anti-tank fire has already been discussed, along with the degree to which it disrupted the operation's timetable. This situation occurred again a few days later, and with even greater consequences, as the Guards Armoured Division advanced out of the Waal bridgehead at Nijmegen onto "The Island" between the Waal and the Lower Rhine on the 21<sup>st</sup> of September. With the 1<sup>st</sup> Airborne struggling to hold out at Oosterbeek, 2<sup>nd</sup> Army sent them a message at 0115 that morning, informing them that the Guards Division was planning to go "flat out" to get through to them that day.<sup>314</sup> This "flat out" advance, starting in the early afternoon, once again quickly ground to a halt just short of the town of Elst, however, in the face of a relative handful of German anti-tank and self-propelled guns firing from the cover of nearby orchards, fire that quickly knocked out several of the leading tanks. With his tanks unable to maneuver off the embanked road, and with the infantry of the 3<sup>rd</sup> Irish Guards too few in numbers to drive the German troops out of the orchards, Lieutenant Colonel J.O.E. Vandaleur of the Irish Guards Group called for artillery and air support to break through the roadblock.<sup>315</sup> However, traffic jams along the single road to the rear ensured that only a

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<sup>313</sup> WO 171/1250 *War Diary 1<sup>st</sup> (Armoured) Battalion Coldstream Guards, Appendix G, September 1944.*

<sup>314</sup> WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division, 21<sup>st</sup> September 1944.*

<sup>315</sup> WO 171/341 *War Diary HQ 30 Corps, Battle Logs September 1944, Sitreps Sept 21<sup>st</sup>*; WO 171/1257 *War Diary 3<sup>rd</sup> Battalion Irish Guards, 21<sup>st</sup> September 1944*; WO 171/1256 *War Diary 2<sup>nd</sup> (Armoured) Battalion Irish Guards, 21<sup>st</sup> September 1944*; Harvey, *Arnhem*, pp. 125-26.

single battery of field artillery was within range of the combat at Elst – not nearly enough to effectively suppress the fire coming from the German positions.<sup>316</sup>

Thus what might be seen as a simple traffic problem ensured that the Guards Armoured Division's extensively reinforced artillery complement was rendered all but useless at a critical juncture in the operation. Furthermore, though the 2<sup>nd</sup> TAF had managed to get a few cab rank Typhoon fighter-bombers over the column to cover the advance, the failure of the column forward air controller's ground-to-air radio set meant that, though they were clearly visible overhead to the combatants, the Guards found themselves frustratingly unable to call the fighter-bombers down onto the concealed German positions, leaving them with little option but to simply fly home with their ordnance undelivered soon thereafter.<sup>317</sup>

In the face of this absence of firepower to support his leading division, General Horrocks made a drastic decision, effectively choosing to call off the Guards Armoured Division's advance and summoning the 43<sup>rd</sup> Infantry Division to take over the lead in pushing to the Lower Rhine, reasoning that an infantry division would be able to operate more effectively in the terrain of the Island.<sup>318</sup> However, with the 43<sup>rd</sup> Division's three brigades scattered well back along the jammed road, it was another day before even the leading brigade was in position to resume the attack. Furthermore, once they were in position the infantry of the 43<sup>rd</sup> Division proved to need overwhelming firepower just as much as did the tanks of the Guards Armoured Division to effectively press home its attacks. Having been able to bring up only a portion of his artillery to support the three battalion attacks he had planned for the 22<sup>nd</sup>, and with General Horrocks having ordered extreme economy in the use of artillery ammunition in light of the cutting of the corps' lines of communication at Veghel earlier in the day, Major General Thomas of the

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<sup>316</sup> WO 205/1126 21 Army Group – Operation "Market Garden" – 17-26 September 1944, p. 55; LoFaro, *The Sword of St. Michael*, pp. 391-92.

<sup>317</sup> WO 171/1256 War Diary 2<sup>nd</sup> (Armoured) Battalion Irish Guards, 21<sup>st</sup> September; WO 171/1257 War Diary 3<sup>rd</sup> Battalion Irish Guards, 21<sup>st</sup> September; Horrocks, *A Full Life*, p. 221; Ryan, *A Bridge Too Far*, pp. 412-16.

<sup>318</sup> Horrocks, *A Full Life*, p. 221-22; WO 171/341 War Diary HQ 30 Corps, *Battle Logs September 1944*, *Sitreps* 21<sup>st</sup> and 22<sup>nd</sup> September 1944; WO 171/341 War Diary HQ 30 Corps, *30 Corps Operational Instruction No. 25*, 23<sup>rd</sup> September 1944, p.1; WO 171/480 War Diary HQ 43<sup>rd</sup> Division, 18<sup>th</sup> September to 21<sup>st</sup> September 1944; WO 171/480 War Diary HQ 43<sup>rd</sup> Division – *Message from 43<sup>rd</sup> Division HQ to 130 Infantry Bde, 214<sup>th</sup> Inf Bde, and 23 Liaison HQ*, 21<sup>st</sup> September 1944; WO 171/480 War Diary HQ 43<sup>rd</sup> Division, *Warning Order from BGS 30 for Future Ops*, 1600, 23<sup>rd</sup> September 1944; Powell, *The Devil's Birthday*, pp. 180-83.

43<sup>rd</sup> decided to concentrate the bulk of his guns in support of the attack of the 7<sup>th</sup> Somerset Light Infantry on the town of Oosterhout astride a branch road leading north. Though this attack subsequently succeeded, taking over a hundred POWs while costing the 7<sup>th</sup> SLI only nineteen casualties, the attacks by the other two battalions at Elst failed to make any significant progress in the face of a determined German defence. Similarly, ongoing attacks on the town of Bommel by the Welsh Guards Group, in support of the 43<sup>rd</sup> Division's right flank, made little progress in light of the limited artillery support available.<sup>319</sup> In the end, with both the 43<sup>rd</sup> Division and the elements of the Guards Division still remaining on the Island struggling to deploy the full weight of their firepower in the face of strong resistance and confining terrain, the towns of Elst and Bommel held out until the evening of the 25<sup>th</sup>, preventing XXX Corps from pressing forward to Arnhem via the main road before the decision to evacuate the Oosterbeek perimeter was made.<sup>320</sup> Thus, the reliance that the forces of XXX Corps placed upon their extensive artillery firepower to overcome any opposition, combined with the corps' persistent inability to effectively deploy that firepower in a timely manner throughout the campaign, due to the terrain and local circumstances, contributed greatly to the generally slow progress that the corps made towards Arnhem, and its subsequent inability to reach the 1<sup>st</sup> Airborne Division in time. The leading role that British doctrine allocated to centralized artillery firepower in defeating enemy forces thus left XXX Corps ill-equipped to carry out the mission of deep, rapid exploitation assigned to it.

Another consequence of the British Army's general reliance upon centrally controlled artillery as its main source of firepower was the resulting relative paucity of organic firepower provided to its infantry units – a situation which was, as has already been made apparent, even more pronounced in the airborne forces than it was among the general infantry forces. Prior to the First World War, British doctrine (like that of most nations of the era) saw infantry as the primary arbiter of battle, with all other branches working merely to support its efforts<sup>321</sup> The experiences of the First World War and the tight

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<sup>319</sup> WO 171/1259 *War Diary 1<sup>st</sup> Battalion Welsh Guards*, 21<sup>st</sup> to 23<sup>rd</sup> September 1944.

<sup>320</sup> WO 171/341 *War Diary HQ 30 Corps*, 25<sup>th</sup> September; WO 171/341 *War Diary HQ 30 Corps, Battle Logs September 1944, Sitreps*, 22<sup>nd</sup> to 25<sup>th</sup> September 1944;

<sup>321</sup> French, "Doctrine and Organization in the British Army," pp. 503-4; Samuels, *Command or Control?*, p. 103.

military budgets of the interwar period changed this perception however, leaving infantry with a relatively limited role in post-war British doctrine, in spite of its official emphasis on combined arms warfare. The offensive use of infantry on any sizable scale – even employing the more effective platoon tactics developed by the end of the war - was seen as being too costly in terms of casualties in light of ever increasing modern firepower. The language used in the 1935 Field Service Regulations Manual regarding the role of infantry is quite instructive – while most previous doctrine had emphasized infantry as the primary means of winning battles, the 1935 manual described its role as that of merely “confirming” victories won by an all arms effort, by closing with the enemy to take and occupy ground.<sup>322</sup> Furthermore, FSR 1935 emphasized that, while strong on the defensive, where it could benefit from the use of terrain, field entrenchments, and concealment, infantry was “relatively weak in the attack” and that it would normally rely upon the supporting fire of artillery and tanks in the offensive.<sup>323</sup> The 1935 doctrine saw only a limited role for an infantry unit’s organic machine guns and mortars in supporting attacks, and suggested that infantry should only try to attack under the cover of its own organic weapons fire in the most favourable of circumstances – against a very weak or disorganized enemy –and that this would be a demanding task even then.<sup>324</sup> British interwar doctrine thus effectively reduced the role of infantry to that of a mere “clean-up crew” for the artillery, relying almost entirely upon preliminary artillery barrages to actually overcome the enemy’s capacity to resist so that all that was left for the infantry to do was the final assault into and occupation of the enemy positions.<sup>325</sup>

As such, little need was seen for either equipping infantry units with their own heavy weaponry or for developing proper fire and movement tactics with which the infantry might suppress an enemy’s resistance and then close to assault through their own means. British infantry units generally saw little improvement to, and even some decline in, their own organic firepower in the interwar period, as budget

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<sup>322</sup> British General Staff, *Field Service Regulations, Vol. II. Operations – General (1935)*, Section 4, p. 7, Section 62, p. 124; French, *Raising Churchill’s Army*, p. 27.

<sup>323</sup> British General Staff, *Field Service Regulations, Vol. II. Operations – General (1935)*, Section 4, p. 8, Section 73, pp. 143-44.

<sup>324</sup> British General Staff, *Field Service Regulations, Vol. II. Operations – General (1935)*, Section 4, p. 8, Section 62, p. 126.

<sup>325</sup> Place, *Military Training in the British Army 1940-1944*, pp. 41, 79; French, *Raising Churchill’s Army*, pp. 39-40.

cuts severely limited initial postwar plans to expand the complement of machine guns, mortars, and other support weaponry with which infantry platoons had been so usefully equipped in 1917-18. British infantry throughout the period generally continued to depend upon their own rifles and bayonets, supplemented by a single light machine gun per squad, a 2" light mortar of limited utility in each platoon, and a few 3" mortars at the battalion level. All other heavy infantry weapons – such as heavy machine guns capable of sustained fire or heavier mortars – were held at the brigade or even the divisional level, for assignment and allocation by higher COs as they saw fit<sup>326</sup>. In effect, the British infantry doctrine in use through the interwar period and much of the Second World War had actually regressed from that standards of 1918, with their heavy emphasis on platoon based fire and maneuver tactics using the platoon's own Lewis machine guns and rifle-grenade launchers, reverting to a state closer to that of pre-World War I doctrine, focused on assault with the bayonet.<sup>327</sup> The 1935 FSR, as well as infantry manuals produced as late as 1937 and 1938, suggested that the best practice for infantry was to maintain a steady advance behind the supporting rolling barrage, without any stopping to fire unless absolutely necessary, ensuring the maximum degree of order and control; these suggestions bear a rather unsettling resemblance to the practices that proved so costly at the Somme in July 1916.<sup>328</sup>

The British Army thus entered the Second World War with a relatively limited doctrine for infantry combat, with their infantry being trained to operate effectively only as part of a combined arms team at the divisional level and up. In the wake of the crushing defeat of the BEF in France in 1940, some elements among the British military leadership did make concerted efforts to improve the performance of their infantry in the lull as they awaited either a possible German invasion or the resumption of their own offensive efforts. Perhaps most notable among these efforts was the development of "battle drills" to train

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<sup>326</sup> Myatt, *The British Infantry 1660-1945*, pp. 195-98; French, *Raising Churchill's Army*, p. 38.

<sup>327</sup> French, *Raising Churchill's Army*, p. 136; French, "Doctrine and Organization in the British Army," pp. 503-4, 508-9; Murray, "British Military Effectiveness in the Second World War," p. 127.

<sup>328</sup> British General Staff, *Field Service Regulations, Vol. II. Operations – General (1935)*, Section 62, p. 125; French, *Raising Churchill's Army*, p. 39.

British infantry in the long neglected basic skills of fire and movement, which might enable them to engage and close with the enemy without extensive artillery support.<sup>329</sup>

These battle drills, which were sets of standardized patterns of fire and maneuver to be used in response to specific situations encountered, were developed – largely on the basis of First World War models – by various commanders and within various units through the early years of the war. By mid-1942 they were being adopted fairly widely – though hardly universally – across British forces in the Mediterranean and at home.<sup>330</sup> While battle drills were certainly an improvement upon the near total neglect of basic infantry tactics that had existed before, their overall impact was fairly limited. The developers of battle drill, particularly Major Lionel Wigram, the chief instructor at the British Army's central "Battle School" established in December 1941, had intended the drills to serve as a mere basis for a deeper and broader development of tactical skills throughout the army, building a sense of tactical judgment among officers and men by helping them to understand why certain tactics worked in certain situations, knowledge which would eventually allow them to learn to mix, match, and adapt the set tactical patterns to non-standard situations as needed.<sup>331</sup> In practice, however, few British units were able to advance beyond the simple rote enactment of the standard drills, often in a very rigid and stereotypical manner. Though perhaps a good starting point, battle drills were adopted too late, and with too little enthusiasm and support from the British Army leadership, to develop the deeper skills of tactical judgment they aimed at.<sup>332</sup>

In the field, these problems of infantry tactics quickly became a sort of vicious circle – the more inadequate British infantry tactics proved in practice, the more that British forces in the field found themselves needing to rely upon heavier and heavier artillery support, which in turn ensured that little improvement was actually made in the abilities of the infantry as they learned to simply rely on the

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<sup>329</sup> Bull, *World War II Infantry Tactics: Squad and Platoon*, p. 15.

<sup>330</sup> Place, *Military Training in the British Army 1940-1944*, pp. 49-53, 58, 60; Krang, *The British Army and the People's War 1939-1945*, pp. 81-83; French, *Raising Churchill's Army*, pp. 203-7.

<sup>331</sup> Place, *Military Training in the British Army 1940-1944*, p. 50; French, *Raising Churchill's Army*, p. 206.

<sup>332</sup> Bull, *World War II Infantry Tactics: Squad and Platoon*, p. 19; Myatt, *The British Infantry 1660-1945*, p. 211; Place, *Military Training in the British Army 1940-1944*, pp. 53-54, 64-65.

artillery to do the bulk of the work for them, effectively developing a sort of “addiction” to artillery firepower.<sup>333</sup> Increasingly, faced with any sort of resistance, the standard response of British troops became to stop and call for fire support. From late 1942, the British Army had generally not really been faced with a situation where it did not have access to a lavish degree of artillery and air support for any significant amount of time – thus the potential weakness that such dependence represented was never properly perceived or understood. Though battle drills remained in use throughout the war, the rise of the “Colossal Cracks” doctrine, and experience with its employment in the Mediterranean and Normandy, effectively confirmed the preexisting doctrinal view of the relationship between infantry and artillery within British operational technique.

Though the lack of effective infantry firepower or tactics was thus not a fatal impediment for the well-supported infantry divisions of the British ground forces, it quickly proved to be a devastating weakness for the isolated 1<sup>st</sup> Airborne Division at Arnhem. Compared to even the fairly meager assets available to infantry battalions within a standard British infantry division, the infantry units of a British airborne division were severely lacking in organic firepower. Beyond the rifles and Bren light machine guns of its infantry squads, and a single 2” mortar per platoon (which lacked the explosive power to be useful for much more than laying smokescreens) each battalion of a 1944 British infantry division had only a platoon of six 3” mortars to provide immediate organic fire support to its four rifle companies.<sup>334</sup> This firepower could be supplemented, however, by the allocation of detachments from the divisional Machine Gun Battalion, which fielded sixteen 4.2” heavy mortars and thirty-six .303 Vickers medium machine guns.<sup>335</sup> In contrast, while the British Parachute Battalion of 1944 fielded its own platoon of four Vickers guns in its Support Company, its mortar platoon was reduced to only four tubes (technically the

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<sup>333</sup> French, *Raising Churchill's Army*, p. 207; Hart, *Montgomery and “Colossal Cracks,”* pp. 7. 97; Place, *Military Training in the British Army 1940-1944*, pp.74-75, 168-69.

<sup>334</sup> Myatt, *The British Infantry 1660-1945*, pp. 200-201; Place, *Military Training in the British Army 1940-1944*, p. 41.

<sup>335</sup> Stephen Bull, *World War II Infantry Tactics: Company and Battalion* (Oxford: Osprey Publishing, 2005), p. 17; Myatt, *The British Infantry 1660-1945*, p. 206.

battalion was authorized eight mortars, but could only crew the extra four by swapping out the medium machine guns, which the battalions at Arnhem do not seem to have done.)<sup>336</sup>

The airborne division's three airlanding battalions were considerably better off, with each battalion fielding a "Mortar Group," with twelve 3" tubes and two four-gun MMG platoons.<sup>337</sup> This extra firepower was largely wasted in the offensive phase of Market, however, as the battalions of the 1<sup>st</sup> Airlanding Brigade remained guarding the landing zones while the lighter, but more mobile, parachute battalions of the 1<sup>st</sup> Parachute Brigade led the push towards the bridges; Urquhart later stated that the 1<sup>st</sup> Airlanding Brigade's firepower "would have been invaluable offensively during the first twenty-four hours."<sup>338</sup> Even when the 2<sup>nd</sup> Battalion, South Staffordshire Regiment was sent to join the 1<sup>st</sup> Parachute Brigade's attack on the afternoon of the 18<sup>th</sup>, most of its heavy weapons were left behind to help protect the landing zones and Divisional HQ area, depriving the assault force of what might have been a significant boost to their firepower.<sup>339</sup> Moreover, unlike a standard infantry division, the British airborne divisions had no pool of additional infantry heavy weapons to call upon, leaving the attacking parachute battalions almost entirely reliant upon the overburdened divisional light artillery regiment for fire support.

As a result of this shortage of firepower, British parachute battalions relied heavily upon aggressive close-range shock tactics, taking advantage of their high-level of marksmanship, fitness, discipline, and high morale to close with the enemy and overwhelm him in close combat.<sup>340</sup> These tactics were very prevalent at Arnhem, with numerous references throughout the documentation and literature on the battle to the widespread use of bayonet charges to clear German resistance nests or counterattack penetrations.<sup>341</sup> To be sure, these tactics could often achieve a degree of success, at least in the short term.

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<sup>336</sup> Myatt, *The British Infantry 1660-1945*, pp. 208-9; Gordon L. Rottman, *World War II Airborne Warfare Tactics* (Oxford: Osprey Publishing, 2006), p. 49.

<sup>337</sup> Myatt, *The British Infantry 1660-1945*, pp. 209-10; Gordon L. Rottman, *World War II Glider Assault Tactics* (Oxford: Osprey Publishing, 2014), p. 40.

<sup>338</sup> Urquhart, *Arnhem*, p. 199; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division, Annexure F: 1<sup>st</sup> Airlanding Brigade Operational Order No. 1*, 13<sup>th</sup> September, p. 1-2.

<sup>339</sup> CAB 106/1078 *The South Staffordshires in the Battle of Arnhem*, p. 9; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division – 1 Air Landing Bde – Operation Market, 17<sup>th</sup> to 26<sup>th</sup> Sept 1944, Annexure O.2*, 19<sup>th</sup> September 1944, p. 5-7.

<sup>340</sup> Rottman, *World War II Airborne Warfare Tactics*, p. 57.

<sup>341</sup> Urquhart, *Arnhem*, pp. 107-9; Ryan, *A Bridge Too Far*, pp. 262-63, 275.

However, they also proved extremely costly; right from the start, the British paratroops seem to have suffered heavily every time they clashed with the Germans, even in the relatively limited scale skirmishes of the first 24 hours. For example, the 1<sup>st</sup> Parachute Battalion's R Company was reporting approximately half of its original 117 men having fallen as casualties by midnight on the 17<sup>th</sup>/18<sup>th</sup>, less than twelve hours after the landings, while, in the wake of a series of assaults on German strongpoints throughout the morning of the 18<sup>th</sup>, the same battalion's T Company was reduced to a mere 22 men by the early afternoon.<sup>342</sup>

Similarly, accounts of the desperate final assault into Arnhem on the 19<sup>th</sup> describe an almost Napoleonic series of bayonet charges up the main streets of Arnhem towards the German lines located in lines of buildings along perpendicular streets; an assault which historian Robert Kershaw described as "the tragedy of the "Charge of the Light Brigade" in miniature." Though the charge overran a few outlying positions, it eventually ended, as mentioned earlier, with only a handful of unwounded men even reaching the main German lines before being overwhelmed by the subsequent counterattack.<sup>343</sup> When a headcount was conducted of the remnants of the four attacking battalions on the evening of the 19<sup>th</sup>, it was found that only 116 and 40 men were left in the 1<sup>st</sup> and 3<sup>rd</sup> Parachute Battalions, respectively (from an establishment strength for a parachute battalion of 613), while the 11<sup>th</sup> Parachute Battalion and the 2<sup>nd</sup> South Staffordshires, neither of which had been engaged with the enemy before that morning, were down to 150 and 100 men respectively, with the South Staffordshires having landed with a total of 779 men.<sup>344</sup>

Moreover, these shock tactics continued even after the devastating losses of the 19<sup>th</sup>, with numerous German penetrations of the Oosterbeek perimeter being counterattacked at bayonet point. One such counterattack by the 7<sup>th</sup> KOSB retook a lost position, but this minor recoup reduced the battalion,

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<sup>342</sup> WO 171/592 *War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix B: Diary of Events, 1<sup>st</sup> Parachute Battalion*, September 1944, pp. 1-2.

<sup>343</sup> Kershaw, *"It Never Snows in September,"* p. 165; WO 171/592 *War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix A: Operation "Market", Story of 1 Parachute Brigade, Consolidated Report by Brigadier Lathbury, 31<sup>st</sup> October 1944*, pp. 3, 8-9; WO 171/592 *War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix B: Diary of Events, 1<sup>st</sup> Parachute Battalion*, September 1944, p. 1.

<sup>344</sup> WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division*, 2315, 19<sup>th</sup> September 1944; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division – 1 Air Landing Bde – Operation Market, 17<sup>th</sup> to 26<sup>th</sup> Sept 1944, Annexure O.2, 19<sup>th</sup> September 1944*, pp. 7-8; CAB 106/1078 *The South Staffordshires in the Battle of Arnhem*, p 38.

which had numbered 270 men the previous day, to less than 150, with so few men left standing that the position soon had to be given up again as the battalion pulled back to a shorter line; the 7<sup>th</sup> KOSB's War Diary also notes that this fight cost them twelve officers, including the last of their company commanders, as well as their last company sergeant majors.<sup>345</sup> Clearly the 1<sup>st</sup> Airborne Division's shock tactics were a losing prospect at Arnhem, producing only limited results while rapidly inflicting a scale of casualties that rendered the division's infantry brigades almost entirely combat ineffective less than two days after they landed. Thus, lacking in either artillery or organic firepower, and not trained or equipped to fight effectively without outside support, the British 1<sup>st</sup> Airborne Division was forced into exactly the sort of costly infantry assaults that British interwar doctrine had sought to avoid, which quickly rendered the division unable to complete its mission.

Given the lack of firepower that was essentially inherent to airborne formations, it is perhaps not surprising that most nations that began experimenting with airborne forces through the interwar and early war period saw tactical air power as a potentially invaluable source of support for these types of operations, given their ability to act as long-range aerial artillery for the isolated and under gunned formations operating beyond the range of the guns of the main ground forces. The Germans, in particular, saw the provision of the greatest possible level of tactical air support to airborne operations as critical to their success.<sup>346</sup> As mentioned above, by the time of the Normandy campaign, the Allies had developed ground-air tactical cooperation into a "fine art," with air attacks targeted on the German ground forces playing a prominent role in most of their operations there.<sup>347</sup> Like their artillery, Allied troops came to depend heavily upon the support of their fighter-bombers and increasingly called upon them to deal with any significant resistance; as Lieutenant-General Lewis Brereton, who had commanded the American 9<sup>th</sup> Tactical Air Force in Normandy before taking command of the 1<sup>st</sup> Allied Airborne Army for Market

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<sup>345</sup> WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division, 21<sup>st</sup> September 1944*; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division – Report on Operation "Market", Arnhem 17-26 Sept. 1944*, 10<sup>th</sup> January 1945, p. 20; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division – 1 Air Landing Bde – Operation Market, 17<sup>th</sup> to 26<sup>th</sup> Sept 1944, Annexure O.2*, pp. 8, 10; WO 171/1323 *War Diary 7<sup>th</sup> (Galloway) Battalion The King's Own Scottish Borderers, 21<sup>st</sup> September 1944*.

<sup>346</sup> Ritchie, *Arnhem – Myth and Reality*, pp. 27, 36.

<sup>347</sup> Montgomery, *El Alamein to the River Sangro/Normandy to the Baltic*, pp. 239-40, 247-54, 263-64, 266, 275.

Garden said: "It was an ordinary occurrence for the ground forces, held up by a strong point, to call on the Ninth Air Force for help."<sup>348</sup> It is worth noting that the actual physical damage inflicted by such air strikes is highly debatable, with studies both at the time and since suggesting that it was usually much less than the air forces claimed, given the limitations of contemporary air-to-ground weaponry. Its morale effect, however, was considerable for both sides; German troops often panicked and scattered for cover at the mere appearance of fighter-bombers overhead, while Allied troops were usually heartened by the sheer spectacle of their strikes, if nothing else.<sup>349</sup> By the end of the Normandy campaign, tactical close air support (CAS) had become an integral and vital part of Allied ground combat efforts, with some observers and historians crediting it as the single most important factor in the Allied victory.<sup>350</sup>

Unfortunately, by the time of Market-Garden, this support had been so long and so widely available that it seems that the Allied planners involved took it almost entirely for granted, forgetting the extensive preparation and planning that it had taken to provide such a level of support to date. As such, the planning for the provision of tactical air support for Market Garden, particularly for the airborne formations that needed it most, was generally quite poor, ensuring that the powerful Allied tactical air forces played only a limited role in the campaign.<sup>351</sup> Matters actually started off fairly well, with the initial pre-planned and heavily choreographed bombardments and support for the initial airlifts, such as fighter escort and flak suppression, proving fairly effective, ensuring that very few transports were lost to the German air defences.<sup>352</sup> The air support plan for XXX Corps focused largely upon the initial effort to penetrate the German lines, utilizing the "cab rank" of Typhoon fighter-bombers discussed earlier, but the arrangements for this scale of air support extended only as far as Valkenswaard, just seven miles beyond

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<sup>348</sup> Brereton, *The Brereton Diaries*, p. 299.

<sup>349</sup> Dupuy, *The Evolution of Weapons and Warfare*, pp. 248-49; Zetterling, *Normandy 1944*, pp. 38-40, 42, 45.

<sup>350</sup> Brereton, *The Brereton Diaries*, pp. 319-20; Horrocks, *A Full Life*, p. 184; Jamie Slaughter, "Allied Close Air Support during Operation Market Garden: A Lesson in Planning" in *Operation Market Garden: The Campaign for the Low Countries, Autumn 1944: Seventy Years On*, eds. John Buckley and Peter Preston-Hough (Solihull: Helion & Company, 2016), p. 99; Hart, *Montgomery and "Colossal Cracks,"* p. 120.

<sup>351</sup> Slaughter, "Allied Close Air Support during Operation Market Garden," p. 99; Tugwell, *Arnhem: A Case Study*, p. 28.

<sup>352</sup> Brereton, *The Brereton Diaries*, pp. 345-46; WO 205/873 *Report on Operations "Market" and "Garden," September to October 1944*, p. 7; Ritchie, *Arnhem – Myth and Reality*, pp. 235-37.

the initial front lines.<sup>353</sup> Tactical air support for the airborne divisions focused on supporting the initial landings with pre-planned strikes on fixed targets around the various landing zones, such as flak positions and known barracks, with the operational orders emphasizing that the level of support for the airlifts was to be at the “max scale.”<sup>354</sup>

The provision of ongoing close air support to the ground and airborne forces after the initial attacks, however, was much less efficiently arranged. In perhaps the first and most blatant error in the planning process, particularly in light of Montgomery’s views on the “joint” nature of modern warfare, Air Marshal Sir Arthur Coningham, the commander of the force given primary responsibility for providing close air support for the operation, the RAF’s 2<sup>nd</sup> Tactical Air Force, and one of the key architects of the close air support methods developed in North Africa, was not invited to any of the planning conferences for Market Garden bar one on the 16<sup>th</sup>, only a day before the operation began; ironically, he was unable to attend this meeting when his flight was grounded by weather.<sup>355</sup> Similarly, though Air Vice-Marshal Harry Broadhurst, commander of the 2<sup>nd</sup> TAF’s 83 Group, which would provide the fighter-bombers required, and his staff were consulted by the 21<sup>st</sup> Army Group headquarters, this meeting came only on the 15<sup>th</sup>, leaving them with very little time to put effective plans into place before the operation began.<sup>356</sup>

This rushed planning process, with minimal effort made to coordinate effectively with the commanders who were both the ones that would be directing the air support effort and those with the best experience and knowledge to advise on the requirements and limitations of such an effort, ensured that several aspects vital to the provision of effective close air support were ignored or neglected in the Market Garden plans. Perhaps most notably, the 1st Airborne Division, which possessed no trained forward air

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<sup>353</sup> WO 171/341 *War Diary HQ 30 Corps, 30 Corps Air Notes, No. 132*, 16<sup>th</sup> September 1944, pp. 1-2; WO 205/1126 *21 Army Group – Operation “Market Garden” – 17-26 September 1944*, pp. 8-9.

<sup>354</sup> WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division, 1<sup>st</sup> Parachute Brigade Operational Order No. 1, Annexure D*, 13<sup>th</sup> September 1944, p. 6; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division, Annexure F: 1<sup>st</sup> Airlanding Brigade Operational Order No. 1*, 13<sup>th</sup> September 1944, p. 3.

<sup>355</sup> Slaughter, “Allied Close Air Support during Operation Market Garden,” p. 102.

<sup>356</sup> Cirillo, “Market Garden and the Strategy of the Northwest Europe Campaign,” pp. 48-49; Slaughter, “Allied Close Air Support during Operation Market Garden,” pp. 101-2; Middlebrook, *Arnhem 1944*, p. 68.

controllers (FACs) of its own, had to be hastily provided with the means to communicate with supporting aircraft at almost the very last moment. Two American FAC teams, equipped with jeep-mounted Very High Frequency (VHF) SCR-193 radio sets for communication with aircraft, were thus assembled and attached to the 1<sup>st</sup> Division, but the lack of notice and adequate command attention meant that, rather than being properly trained and experienced FAC specialists, the two officers and eight men assigned were simply drawn from whatever US Army Air Force communications personnel happened to be available. As it turned out, no one in either party was actually familiar with the operation of the highly specialized radio equipment, nor with the proper procedures for forward air control. As such, when the men of the two parties found shortly after the landings that their SCR-193 sets had been pre-tuned to the wrong frequencies, they were entirely unable to fix the problem, and thus could not establish contact with either the 2<sup>nd</sup> Army, or any aircraft; adding insult to injury, both radio sets, which were too large to be dismounted from their vulnerable jeeps, were soon destroyed by mortar fire, ensuring that, throughout Market Garden, the 1<sup>st</sup> Airborne Division never possessed the means to call down and direct fighter-bombers. As one of the division's after action reports noted, with more than a hint of frustration, these air control parties, a vital factor in the ability to effectively wield airpower on the battlefield, proved "quite useless."<sup>357</sup> Without this direct contact, the 1<sup>st</sup> Airborne Division's requests for air support had to be routed up the chain of command to the 2<sup>nd</sup> Army's HQ, before being forwarded to the 2<sup>nd</sup> TAF. This was naturally a slow and laborious process, especially in the face of the division's general communications problems; for much of the operation, the only reliable connection to the 2<sup>nd</sup> Army for requesting air support was the link to the 64<sup>th</sup> Medium Regiment established on the 21<sup>st</sup>, a network that was naturally

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<sup>357</sup> WO 171/366 *War Diary HQ 1<sup>st</sup> Airborne Corps – Operation Market Operation Instruction No. 1*, p. 4; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division, Annexure R: Report by CRA 1 Airborne Division on Operation Market, Part III: Air Support*, pp. 1-2. WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division, Annexure T: 1<sup>st</sup> Airborne Division Signals Report on Operation Market, 17<sup>th</sup> Sep 1944 to 26 Sep 1944*, Air Support and Ground Communications p. 1; WO 205/623 *Operational Reports Market Garden, October 1944-January 1945, Appendix A: Comments on Report on Operation Market-Garden, Lessons, Operation "Market-Garden," 10<sup>th</sup> December 1944*, p. 3; WO 205/873 *Report on Operations "Market" and "Garden," September to October 1944, Appendix G, Air Support Notes on Operation Market*.

already heavily burdened with the radio traffic managing the division's requests for artillery support.<sup>358</sup>

This slow process for requesting and directing air support meant that any support requested would usually come far too late to address whatever situation had initially prompted the call, if it came at all.

The air support effort for Market Garden was also badly hindered by the fact that the plan, laid with only minimal input from the airmen responsible for such support, failed entirely to account for the effects that the circumstances prevailing in September 1944 would have on 83 Group's physical ability to provide the air support desired. For one, the ambitious thrust across the Rhine, coming as it did at the end of the lengthy pursuit through France and Belgium, put the Allied spearhead at Arnhem at the very limits of the combat radii of the short-ranged Typhoon and Spitfire fighter-bombers, even when operating from the most advanced Allied air bases in Belgium. Moreover, most of these advance bases had only just been set-up or captured in the last week or two, ensuring that they lacked the full range of supplies or facilities to operate more than a handful of squadrons. This situation was further exacerbated by the overall Allied logistical crisis at the time, with all Allied supplies still having to come over 300 miles by road from the Normandy beaches to the front lines.<sup>359</sup> This ensured that only a limited number of aircraft could be deployed to support of the operation at any one time, and that their loiter time over the battlefield would be limited, leaving them with little opportunity to search out concealed targets or make multiple attacks.

Furthermore, the unpredictable and often poor prevailing weather conditions at the time – fairly typical for a northwestern European autumn - also proved a major limiting factor, with bad weather over either the airfields or the battlefield often keeping tactical aircraft grounded for days at a time, with support operations being flown on only five of the nine days of the battle.<sup>360</sup> Weather was the main factor that led the RAF to turn down 46 out of the 95 requests for air support it received from the airborne forces during the battle and in its immediate aftermath. XXX Corps, which was not generally plagued by the same level of ground-to-air communications problems that hampered the 1<sup>st</sup> Airborne Division, remarked

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<sup>358</sup> WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division, Appendix K: 1<sup>st</sup> Airborne Operational Instruction No. 10 – Additional Notes on Operation Market*, 13<sup>th</sup> September 1944, p. 1; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division, Annexure R: Report by CRA 1 Airborne Division on Operation Market*, p.1.

<sup>359</sup> Ritchie, *Arnhem – Myth and Reality*, pp. 213-15.

<sup>360</sup> Powell, *The Devil's Birthday*, p. 208.

in many of its daily reports upon the degree to which weather conditions severely limited what air support could be provided to their advance.<sup>361</sup> Montgomery in particular cited these weather conditions as one of the most critical factors in Market Garden's failure, stating in his memoirs that "had good weather obtained, there was no doubt that we should have attained full success."<sup>362</sup> Though there may be a degree of truth to this, and the weather was naturally a factor entirely beyond Montgomery's or anyone else's control, this does not mean that the Field Marshal and the other Allied leaders involved are entirely free of blame in the matter. Given that they were fully aware of the prevailing weather conditions of the region and season, the very fact that they chose to undertake an operation so dependent upon the extensive use of airpower and thus upon a highly unlikely prolonged stretch of clear skies over both Britain and the continent, makes those planners at least partially responsible for the impact that the weather had upon the operation's level of tactical air support and thus upon denying their forces the firepower they so relied upon to operate effectively. The fact that Montgomery's Market Garden plan failed almost entirely to account for the potential effects of weather suggests a very serious lapse in judgment for the normally air-minded Field Marshal.

The critical end result of all these problems was the virtual absence of tactical air support in the skies over Arnhem and Oosterbeek through most of the battle. Urquhart, in particular, was bitterly disappointed by the degree of air support provided, believing that, had tactical aircraft been available on the scale that had been the norm over France, his division's chances for success would have been vastly improved.<sup>363</sup> One after action report noted simply that direct support from 83 Group to the 1<sup>st</sup> Airborne Division was "negligible" up until the 23<sup>rd</sup>. Even when the number of aircraft put over the 1<sup>st</sup> Airborne perimeter on a daily basis significantly improved thereafter, with twenty-four Typhoons dispatched on

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<sup>361</sup> WO 205/1126 21 Army Group – Operation "Market Garden" – 17-26 September 1944, pp. 38-56; WO 171/341 War Diary HQ 30 Corps, Corps Air Notes, Notes 132-39; Slaughter, "Allied Close Air Support during Operation Market Garden," p. 103; WO 205/873 Report on Operations "Market" and "Garden," September to October 1944, Appendix G, Air Support Notes on Operation Market p. 2.

<sup>362</sup> Montgomery, *El Alamein to the River Sangro/Normandy to the Baltic*, pp. 319-21, 324; WO 205/623 Operational Reports Market Garden, October 1944-January 1945, Appendix A: Comments on Report on Operation Market-Garden, Lessons, Operation "Market-Garden," 10<sup>th</sup> December 1944, p. 1.

<sup>363</sup> Urquhart, *Arnhem*, pp. 148, 154-55, 202; WO 171/393 War Diary HQ 1<sup>st</sup> Airborne Division – Report on Operation "Market", *Arnhem 17-26 Sept. 1944*, 10<sup>th</sup> January 1945, p. 43.

missions to the Arnhem area on the 23<sup>rd</sup>, for example, the division's complete inability to direct the efforts of those fighter-bombers that arrived over the battlefield onto specific targets severely hampered their ability to intervene in the ground battle to any significant effect.<sup>364</sup> Lacking any specific details on the locations of German targets, and with their ability to seek out those targets themselves severely restricted by the heavily wooded terrain around the Oosterbeek perimeter, pilots were often forced to either turn back without engaging, or resort to simply strafing or rocketing general areas around the perimeter with little in the way of observable results.<sup>365</sup>

These attacks did have significant morale value to the British defenders, however, and even some degree of more practical effect, with several 1<sup>st</sup> Airborne accounts noting that the mere presence of fighter-bombers overhead kept German artillery and mortars silent for fear of betraying their locations and inviting attack.<sup>366</sup> Urquhart later chastised the RAF for not flying more of these "armed reconnaissance" sorties over the perimeter, arguing that "air formations must not expect to be given pin point targets always when air support is demanded," but his view does not fully take into account the great difficulty that tactical pilots had in distinguishing friend from foe while traveling at several hundred miles per hour and at several hundred feet above the battlefield.<sup>367</sup> Due to a combination of luck and skill on the part of the RAF pilots, no friendly fire incidents were reported by the 1<sup>st</sup> Airborne Division, but even a single misplaced strike may have inflicted considerable damage and cured Urquhart of his enthusiasm for "blind" fire from the air. Still, the reported effectiveness of even the meager efforts that the 2<sup>nd</sup> TAF was able to put up over the Arnhem battlefield serves as a hint to the potential difference that better planned and coordinated CAS might have had upon the outcome of the battle. Effective close air support could arguably have made a considerable contribution to Market-Garden, given that it was

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<sup>364</sup> WO 205/1126 21 Army Group – Operation "Market Garden" – 17-26 September 1944, p. 65.

<sup>365</sup> WO 205/1126 21 Army Group – Operation "Market Garden" – 17-26 September 1944, p. 67; WO 205/873 Report on Operations "Market" and "Garden," September to October 1944, Appendic G, Air Support Notes on Operation Market p. 2-3; Harclerode, *Arnhem: A Tragedy of Errors*, pp. 168-69.

<sup>366</sup> WO 171/366 War Diary 1<sup>st</sup> Airborne Corps HQ, Appendix M: Message from 1 A/B Division to 30 Corps, 0900, 24<sup>th</sup> September 1944; WO 171/406 War Diary 1<sup>st</sup> Airborne Reconnaissance Squadron, Squadron HQ, 25<sup>th</sup> September 1944.

<sup>367</sup> Urquhart, *Arnhem*, p. 155; WO 171/393 War Diary HQ 1<sup>st</sup> Airborne Division – Report on Operation "Market", *Arnhem 17-26 Sept. 1944*, 10<sup>th</sup> January 1945, p. 43.

perhaps the only means available to compensate for the 1<sup>st</sup> Airborne Division's lack of organic firepower. But a combination of poor planning and circumstance kept perhaps the Allies most powerful advantage over the Germans in 1944, and a cornerstone of their combat doctrine, all but grounded. With the British spearhead forces thus all but deprived of the full effect of their two most important sources of combat power, tactical air power and artillery, it is hardly surprising that they proved unable to decisively defeat their German opponents.

## CHAPTER 7: THE ROLE OF GERMAN FIREPOWER DOCTRINE IN OPERATION MARKET GARDEN

While the Allied forces participating in Operation Market Garden proved unable to effectively wield the considerable superiority in firepower that was at their disposal in the fall of 1944, the forces of the German Army Group B which confronted the Allied thrust found themselves almost entirely lacking in heavy weaponry, particular with regards to the famed Panzer forces that had been the backbone of their combat capabilities since 1939. The crushing defeat suffered by the 7<sup>th</sup> Armee and 5<sup>th</sup> Panzerarmee in France, and the subsequent panicked rout back to the German border, cost these armies the great bulk of their heavy equipment. Though, as General Eisenhower later lamented, large numbers of German troops had indeed managed to escape the Allied encirclement at Falaise, the need to withdraw at speed across numerous water obstacles (with many crossings having been destroyed), and under near constant attack by Allied air power, meant that the retreating armies were forced to abandon most of their surviving vehicles and artillery along the way.<sup>368</sup> Army Group B was thus in very poor condition as September began; a message from Generaloberst Alfred Jodl, head of the Operations Staff of the Oberkommando der Wehrmacht (Armed Forces High Command) from the 15<sup>th</sup> of September acknowledged that the Army Group had been reduced to holding a 400-km front with forces equating to about twelve divisions, and possessing only an estimated 64 tanks and self-propelled guns; they were estimated to be confronting a force of between twenty and twenty-eight full strength Allied divisions with over 1700 operational tanks.<sup>369</sup>

As such, the main front line forces available to Army Group B for the defence against Market Garden, the 9<sup>th</sup> and 10<sup>th</sup> SS Panzer Divisions of the II SS Panzer Korps, were hardly worthy of their designations “Panzer” or “Division,” having between them lost all but sixteen to thirty-five of their tanks and assault guns, less than seventy variously armed half-tracks and armoured cars, and about two

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<sup>368</sup> Eisenhower, *Crusade in Europe*, pp. 315, 340.

<sup>369</sup> BA/MA RH 19 IV/56 *Fernschreiben von Chef Wehrm.. Führ. Stab Jodl an Armeegruppe B und OKB West*, 1940, 15<sup>th</sup> September 1944; Ryan, *A Bridge Too Far*, pp. 51-52.

battalions worth of artillery (twenty-four tubes).<sup>370</sup> As mentioned in the earlier discussion of Kampfgruppe Spindler, most of the 9<sup>th</sup> SS Panzer Division's vehicle and gun crews (and many of those of the 10<sup>th</sup> as well) fought as infantrymen during the battle, with each division thus effectively operating as a weak light infantry brigade group, with very limited heavy support weaponry.<sup>371</sup> Most of the rest of the forces available to oppose the Allied airborne invasion were even less well provided with such support, comprising as they did a wide variety of small security, administrative and training units, and hastily formed battle groups assembled from stragglers from France. Few of these units were true divisions, and as such mostly lacked the normal array of heavy weaponry deployed in battalions and detachments at the divisional level to support a division's infantry regiments; a standard German infantry division, for example, would include an artillery regiment of four battalions, with a total of thirty-six 10.5cm light howitzers and twelve heavy 15cm howitzers.<sup>372</sup> The great majority of German forces in Holland were thus largely an assortment of what could be called light infantry and not a proper, fully balanced field army with an appropriate array of support units.

In addition to Army Group B's paucity of heavy weaponry, the Luftwaffe, whose effective close support of the German ground forces had been so essential to those forces' widespread successes in the first half of the war, had been reduced to the status of a virtual non-entity in the ground war by the time of the Normandy invasion. Ground down in a near constant series battles with the daylight bombing raids of USAAF's 8<sup>th</sup> Air Force through much of the previous year and a half and left badly short of trained pilots and fuel, the Luftwaffe was only able to play a minor role in the Battle of Normandy.<sup>373</sup>

The Luftwaffe's situation was slightly better in Holland, with the battlefield being closer to its bases in Germany, enabling elements of the still fairly formidable air forces held back to defend the Reich to take part; post-battle Allied intelligence analysis suggested that a total of about 300 operational fighters

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<sup>370</sup> Harclerode, *Arnhem: A Tragedy of Errors*, pp. 36-37; Reynolds, *Sons of the Reich*, pp. 91, 102.

<sup>371</sup> Kershaw, *"It Never Snows in September,"* pp. 103-4, 311.

<sup>372</sup> Samuel W. Mitcham, Jr., *German Order of Battle, Volume One: 1<sup>st</sup>-290<sup>th</sup> Infantry Divisions in WWII* (Mechanicsburg, PA: Stackpole Books, 2007), pp. 3-5.

<sup>373</sup> Jeffrey Ethell and Dr. Alfred Price, *Target Berlin: Mission 250, 6 March 1944* (London: Greenhill Books, 1981), pp. 153-55; Steven J. Zaloga, *Operation Pointblank 1944: Defeating the Luftwaffe* (Oxford: Osprey Publishing, 2011), pp. 86-89.

and/or fighter-bombers were available within operating range of the Market Garden battlefield.<sup>374</sup>

However, the same analysis noted that the Luftwaffe's ongoing lack of fuel and pilots meant that, while more active than they were over France, the Luftwaffe's efforts in Holland were still very limited, with an average of only about 130 to 180 fighter or fighter-bomber sorties over the combat area managed on a daily basis.<sup>375</sup> Though the Allied ground forces involved reported experiencing a number of strafing attacks by German fighters during the battle, often contrasting the surprise reappearance of the Luftwaffe to the relative absence of their own air support, these small-scale, scattered attacks inflicted only minimal casualties and damage and had virtually no meaningful impact upon the overall course of the operation.<sup>376</sup> The only notable contribution the Luftwaffe made during the Market Garden fighting was a raid by about 100 bombers on the city of Eindhoven on the night of the 19<sup>th</sup>/20<sup>th</sup> that destroyed a number of XXX Corps logistical vehicles and added to the traffic jams along the main road.<sup>377</sup> The Luftwaffe's contribution to the fighting power of the Army Group B ground forces in the fight against Market Garden was thus minimal.

Overall, the mostly infantry-based forces fielded by the Germans to oppose Market Garden could count upon very little fire support from other branches or services. This lack of outside firepower, however, was countered by the fact that the German Army had long put a high premium on maximizing the organic fighting power of its infantry units. As was mentioned briefly in the second chapter, the German Army's post-World War One doctrine retained a focus on the primary role of infantry in battle; unlike the "confirming" role assigned to it in the British Field Regulations of 1935, *Truppenführung*

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<sup>374</sup> WO 205/693 *German Air Force Reaction to Airborne Landings in Holland- Headquarters, First Allied Airborne Army*, 2<sup>nd</sup> October 1944, p. 2.

<sup>375</sup> WO 205/693 *German Air Force Reaction to Airborne Landings in Holland- Headquarters, First Allied Airborne Army*, 2<sup>nd</sup> October 1944, p.3.

<sup>376</sup> Frost, *A Drop Too Many*, p. 229; WO 171/366 *War Diary 1<sup>st</sup> Airborne Corps HQ (Main)*, 1800, 17<sup>th</sup> September 1944; WO 171/341 *War Diary HQ 30 Corps, Battle Logs September 1944, Sitrep 1405 20<sup>th</sup> September*; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division – Report on Operation "Market", Arnhem 17-26 Sept. 1944*, 10<sup>th</sup> January 1945, p. 17; WO 171/406 *War Diary 1<sup>st</sup> Airborne Reconnaissance Squadron, C Troop*, 18<sup>th</sup> September; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division – 1 Air Landing Bde – Operation Market, 17<sup>th</sup> to 26<sup>th</sup> Sept 1944, Annexure O.2*, p. 5; WO 171/638 *War Diary HQ 32<sup>nd</sup> Guards Armoured Brigade*, 19<sup>th</sup> September 1944.

<sup>377</sup> WO 171/376 *War Diary HQ Guards Armoured Division, Combat War Diary*, 19<sup>th</sup> September 1944; Burgett, *The Road to Arnhem*, pp. 60-62; WO 205/693 *German Air Force Reaction to Airborne Landings in Holland- Headquarters, First Allied Airborne Army*, 2<sup>nd</sup> October 1944, p. 3.

clearly emphasized that infantry remained the primary arbiter of battle and that the chief task of all other branches was to support the infantry in its mission of overcoming enemy resistance.<sup>378</sup> This view of the leading role of infantry in battle, combined with their experience in the effective use of infantry on the offensive in the First World War, ensured that the leadership of the German Army assigned a high priority to providing their infantry units with a strong complement of organic firepower to maximize their independent combat effectiveness. One of the critical factors in the success of German stormtroop tactics in the latter part of the First World War had been the fact that each storm battalion had been provided with its own extensive complement of support weaponry, with each battalion possessing not only the rifles and light machine guns of its infantry platoons, but also their own heavy machine guns, trench mortars, and light infantry guns. These weapons provided the stormtroop units with a source of ready, on-call firepower under the direct control of the unit itself, which allowed them to effectively employ their own fire and movement tactics to advance, rather than relying exclusively upon the covering fire provided by centrally controlled artillery barrages.<sup>379</sup>

Given the considerable tactical success achieved by stormtrooper tactics in the war (in spite of the German Army's wider failures), it is not surprising that they were not only retained in Seeckt's post-war reorganization, but made into the basis of standard infantry tactics throughout the German Army, rather than merely for specialized assault units.<sup>380</sup> Though *Truppenführung* still emphasized that artillery was a vital source of fire support, and that cooperation between the infantry and artillery was generally essential to success, it also emphasized that infantry was expected to supplement the efforts of the artillery with their own fire, and that they must be prepared to attack under the cover of their own firepower should artillery support not be available, or be outrun by the advance. For both offence and defence, *Truppenführung* emphasized the importance of any infantry unit making use of its own weaponry, from mortars, infantry guns, and heavy machine guns right down to the light machine guns in each rifle squad,

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<sup>378</sup> Condell and Zabecki, (eds.) *On the German Art of War: Truppenführung*, p. 92, 329; Corum, *The Roots of Blitzkrieg*, p. 42.

<sup>379</sup> Dupuy, *The Evolution of Weapons and Warfare*, pp. 226, 229; Samuels, *Command or Control?*, pp. 88-93, 239-40, 271.

<sup>380</sup> Corum, *The Roots of Blitzkrieg*, pp. 42-43.

to suppress enemy firepower, which would in turn enable the ability to maneuver effectively.<sup>381</sup> Sub-units right down to the squad level were expected to support one another with their own fire as circumstances demanded, with each sub-unit advancing by bounds while neighboring squads and heavy weapons covered them.<sup>382</sup>

As such, the infantry units of the Reichswehr and its successor, the Wehrmacht, were superbly equipped for generating their own firepower, with a strong complement of supporting weaponry within their tactical units, apart from the divisional artillery complement. This tendency had only increased by 1944, as the dwindling supply of manpower available to the German Army in light of their immense casualties to date led their leadership to reorganize their units to rely ever more on the firepower generated by machine guns and heavy infantry weapons, rather than riflemen. The variations between official Table of Organization and Equipment (TO&Es) and the reality of German units' equipment were often considerable by 1944, particularly among the improvised units that were so prevalent in Market Garden, but such documents can give a rough indication of the high level of firepower provided to even the smallest German infantry units. According to the 1944 TO&E for an infantry division, each of an infantry regiment's two infantry battalions was to have thirteen light and two heavy machine guns in each of its three rifle companies, with another six heavy and three light machine guns in the battalion's heavy weapons company, alongside six 8cm medium and four 12cm heavy mortars. Added to this at the regimental level were two heavy (15cm) and four light (7.5cm) infantry guns, sometimes replaced on a one-for-one basis by further 12cm mortars.<sup>383</sup> A Panzergrenadier (Armoured or Motorized Infantry) Regiment, such as those in the two SS panzer divisions of II SS Panzer Korps, or the several Panzergrenadier training and replacement regiments fielded against Market-Garden, fielded even greater firepower, with a full strength battalion fielding eighteen light machine guns (with two in each rifle squad), four heavy machine guns and two 8cm mortars in each of its three rifle companies, with a further

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<sup>381</sup> Condell and Zabecki, (eds.) *On the German Art of War: Truppenführung*, p.93, 95, 100-102, 107, 330, 338, 356-58, 380.

<sup>382</sup> Bull, *World War II Infantry Tactics: Squad and Platoon*, p. 30.

<sup>383</sup> W.J.K. Davies, *German Army Handbook 1939-1945* (New York: Arco Publishing, 1977), p. 39.

two heavy machine guns, four 12cm mortars and three 7.5cm infantry guns in the battalion heavy weapons company.<sup>384</sup>

Though most of the front line units that participated in the battle were well under their full authorized strength, particularly the two SS divisions, the priority placed upon heavy weapons for infantry units within German doctrine meant that the bulk of a unit's heavy weaponry was generally retained as much as possible even as manpower dwindled, with riflemen being reassigned to keep the weapons manned as needed. Furthermore, machine guns and mortars were much lighter and more portable than heavier artillery; even the heavy 12 cm mortar weighed only 1,234 lbs compared to the 4,377 lbs of the standard 10.5 cm light field howitzer, which made it much easier for lighter vehicles to tow, while 8cm medium mortars and machine guns could be man-packed.<sup>385</sup> This relative ease of transport ensured that a larger proportion of these weapons were retained throughout the German retreat from France than that of the heavier artillery pieces.<sup>386</sup> SS-Corporal Alfred Ziegler, a member of the 9<sup>th</sup> SS Panzer Division's Kampfgruppe von Allworden, later recalled that "practically every man in the unit had an MG 42" at Arnhem, with the unit having both retained its own machine guns and picked up discarded extra weapons on the retreat from France.<sup>387</sup> Though Ziegler's comment almost certainly contains a degree of hyperbole, it does show that the unit went to great pains to maintain its firepower, and the various battle groups in which the two SS divisions fought during Market Garden most probably possessed a much higher volume of firepower than their simple numbers suggested.

German testimonies and British POW interrogation reports suggest that most of the improvised march companies formed by the two SS divisions from their support and service units for the battle seem to have had at least a standard infantry allocation of machine guns and mortars. Certainly SS Hauptsturmführer (company commander) Hans Möller, the commanding officer of Kampfgruppe Möller, the company-sized remnant of the 9<sup>th</sup> SS Division's armoured engineer battalion that was operating as an

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<sup>384</sup> Davies, *German Army Handbook 1939-1945*, p. 33.

<sup>385</sup> John Norris, *Infantry Mortars of World War II* (Oxford: Osprey Publishing, 2002), p. 33; Ian V. Hogg, *German Artillery of World War Two* (London: Greenhill Books, 2002), p. 45.

<sup>386</sup> Von Zangen, *Battles of the 15<sup>th</sup> Army*, p. 8.

<sup>387</sup> Quoted in Kershaw, *"It Never Snows in September,"* p. 106.

infantry unit, reported that each of his sections (squads) was properly equipped with a light machine gun, for example, a statement that matches the information one of his men provided to his British captors on the 21<sup>st</sup>.<sup>388</sup> Even the various garrison, training, and improvised units that participated in the battle seem to have been allocated a reasonable amount of heavy weaponry to supplement their own small arms, with shortfalls in the standard infantry weapons often being made up through the addition of whatever heavy weapons were at hand, such as anti-tank or anti-aircraft guns, or captured weapons. Prisoners taken from a “Panzergrenadier Regiment 63” on the 21<sup>st</sup>, apparently a training unit recently sent from the German training grounds at Wuppertal, reported that their unit possessed the standard single machine gun per section, along with four 5cm light mortars, two 5cm anti-tank guns and “a few” motorized light flak guns, alongside the usual assortment of rifles and sub-machine guns.<sup>389</sup>

The more eclectic mix of naval and garrison units assigned to the command of Sturmbannführer Krafft of the SS-Panzergrenadier Ausbildungs und Ersatz Battalion (motorized infantry training and replacement battalion) 16 as “Kampfgruppe Krafft” in the wake of his successful efforts on the first day of the battle, were also reasonable well-armed, particularly given that most were new to the infantry role. Krafft’s twenty-three infantry companies, formed into six battalions, mustered an average of four light machine guns apiece, with those battalions also fielding a total of twenty-three heavy machine guns, fourteen 8cm mortars, seven light flak guns, and five anti-tank guns. Furthermore, Krafft could also rely upon the support of two Fortress Machine Gun Battalions, defensive units equipped with thirty-six heavy machine guns and twelve 8cm mortars apiece, and a Luftwaffe flak detachment with twelve 8.8cm and eight 2cm guns.<sup>390</sup> The example of Kampfgruppe Krafft shows the considerable effort that the Wehrmacht took to provide even the most hastily improvised infantry forces with a fairly strong complement of organic firepower.

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<sup>388</sup> Kershaw, “*It Never Snows in September*,” p. 47; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division, Intelligence Summary No. 3*, 0900, 21<sup>st</sup> September 1944, p. 2.

<sup>389</sup> WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division, Intelligence Summary No. 3*, 0900, 21<sup>st</sup> September 1944, p. 2.

<sup>390</sup> BA/MA RS 3-10/4 *Fernschreiben von 9. SS-Panzer Division “Hohenstaufen,” Abt. Ia, an General Kommando der II. SS-Panzer Korps, Ia, “Gliederung der Kampfgruppen,”* 28<sup>th</sup> September 1944.

Furthermore, the German infantry at Arnhem benefitted not only from the ubiquity of machine guns amongst their ranks, but also their high quality. Machine guns were the backbone of German small unit infantry tactics through the period, as they were seen as the best way to generate a great amount of concentrated firepower with relatively few men. A German training manual for light machine guns from 1921 stated that such guns were “the most important weapon that the infantry possesses for the conduct of fire battle,” emphasizing the weapon’s role as the main generator of firepower within a rifle squad, and the central factor in squad tactics.<sup>391</sup> Given this emphasis, the German Army placed a priority on developing and deploying high quality machine guns for its infantry units. The standard German general-purpose machine guns of the Second World War, the MG 34 and its improved successor, the MG 42, were well known among Allied soldiers for their very high cyclic rate of fire – 900 rounds per minute for the MG 34 and over 1,200 RPM for the MG 42, twice that of the standard British Bren light machine gun, and nearly three times that of the Vickers medium machine gun. Moreover, the German guns could sustain much higher rates of fire than their British equivalent, in that they could fire almost continuously using linkable 50-round belts, stopping only to change out overheating barrels. The British Bren, by comparison, could only fire from 30-rd box magazines, ensuring the need for frequent stoppages in fire to reload.<sup>392</sup> The effectiveness of these machine guns meant that even a much reduced German infantry unit could generate an impressive amount of small arms firepower, as long as it could keep its complement of machine guns in action, and that they generally significantly outgunned their British counterparts at the small unit level. Thus, while the German forces fighting in Holland in September 1944 could not count upon a significant amount of artillery, air, or armoured support, their infantry forces possessed a level of fighting power disproportionate to their meagre numbers.

This high level of infantry firepower proved to be a decisive advantage during Market Garden, given the Allies’ inability to bring their superior artillery and airpower to bear. Overall, the fighting in Holland in September 1944 – and particularly at Arnhem - was largely characterized by many small-scale

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<sup>391</sup> Citino, *The Path to Blitzkrieg*, pp. 31-33.

<sup>392</sup> Bull, *World War II Infantry Tactics: Company and Battalion*, pp. 17, 19-20; Bull, *World War II Infantry Tactics: Squad and Platoon*, pp. 26-27; French, *Raising Churchill’s Army*, p. 87.

scattered battles between units of infantry and a relative handful of armoured fighting vehicles with little or no higher level support. In these confused, short-range clashes in wooded and urban terrain, the German Army's superiority in infantry firepower at the small unit level – particularly in machine guns and mortars - allowed its forces to generally dominate the firefights that broke out. Most British accounts of the fighting that took place during their initial push towards Arnhem on the 17<sup>th</sup> and 18<sup>th</sup> emphasize machine gun fire as the main form of resistance encountered, with units often reporting coming under fire from multiple weapons at a time.<sup>393</sup> The concentrated fire from these strongpoints dominated the main roads, and allowed the Germans to engage the advancing British units in devastating close range ambushes as they tried to break through. SS-Corporal Alfred Ziegler of Kampfgruppe von Allworden, for example, reported his unit's fire catching a unit of paratroops still in a single file marching column after having allowed it to get within pointblank range of their concealed positions, rapidly cutting down a number of men before they were able to react and allowing the Germans to seize a claimed "30 to 40 prisoners" from among the stunned survivors. Though Ziegler was almost certainly heavily exaggerating the number of prisoners his unit took in that one brief clash, a photo of the aftermath of this ambush taken by a propaganda photographer and published in the German Army magazine "Signal" clearly shows the bodies of several paratroops scattered along the verges of the road, suggesting there was at least some truth to his account.<sup>394</sup> The number of machine guns deployed by the German infantry, combined with the high fire rate of each individual gun, ensured that even a brief exposure to their fire was deadly, making them very effective in the short, sharp, and often unexpected clashes that characterized fighting in wooded and built up terrain. Even when the British attempted to outflank the machine gun positions covering the roads, these moves often just served to bring them into the sights of further supporting machine gun posts positioned throughout the woods.<sup>395</sup> Moreover, even if the German gunners failed to

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<sup>393</sup> WO 171/592 *War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix D: Diary of Events, 3<sup>rd</sup> Parachute Battalion, 18<sup>th</sup> September 1944*, p. 3; WO 171/592 *War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix B: Diary of Events, 1<sup>st</sup> Parachute Battalion, 18<sup>th</sup> September 1944*, p. 1; Sims, *Arnhem Spearhead*, pp. 63, 65, 69.

<sup>394</sup> Kershaw, *"It Never Snows in September,"* p. 105.

<sup>395</sup> WO 171/592 *War Diary HQ 1<sup>st</sup> Parachute Brigade, Operation Market: Outline of Events, 1<sup>st</sup> Parachute Brigade*, p.2; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division – Report on Operation "Market", Arnhem 17-26 Sept. 1944*,

hit their marks, the blizzard of fire they put out exercised a considerable suppressive effect upon the British advance, forcing the paratroops to frequently halt their advance to take cover. Private James Sims of the 2<sup>nd</sup> Parachute Battalion reported that his platoon was repeatedly engaged and pinned down by machine gun fire in the course of their march to the bridge, with the German gun crews, having succeeded in delaying and disordering their opponents with their fire, often simply disengaging and moving back along the road to repeat the whole process over again.<sup>396</sup>

The German defenders also made effective use of their mortars in this confused early fighting, with the British reporting being frequently taken under fire by accurate concentrations of fire, particularly at the numerous crossroads that provided a natural point of reference for German forward observers and gunners. For example, at about 1800 on the 17<sup>th</sup>, the 3<sup>rd</sup> Parachute Battalion came under an intense barrage of highly accurate mortar fire at a crossroads, which inflicted several casualties and forced the paratroops – along with the accompanying Brigadier Lathbury - to take cover for some time in a series of nearby trenches dug by the Germans for field exercises. Urquhart, who joined Lathbury shortly after this bombardment, while the 3<sup>rd</sup> Battalion was still pinned down, later noted the severity of the delaying effect this fire had upon the advance. With the light failing and the battalion still scattered and confused, Urquhart, Brigadier Lathbury and Colonel Fitch soon decided to keep the battalion where it was and dig in for the night.<sup>397</sup> Beyond the disruptive and suppressive effect this fire had, it also allowed the Germans to inflict significant casualties upon the British forces with a very short amount of time; as previously mentioned, both of the parachute battalions involved in this fighting reported significant losses the first 24 hours, with at least two companies being reduced to below 50% strength.<sup>398</sup> Even the 2<sup>nd</sup> Parachute

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10<sup>th</sup> January 1945, p. 6; WO 171/592 War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix A: Operation "Market", Story of 1 Parachute Brigade, Consolidated Report by Brigadier Lathbury, 31<sup>st</sup> October 1944, p. 3; WO 171/592 War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix B: Diary of Events, 1<sup>st</sup> Parachute Battalion, 17<sup>th</sup> September 1944, p. 1.

<sup>396</sup> Sims, *Arnhem Spearhead*, pp. 63-65.

<sup>397</sup> WO 171/592 War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix A: Operation "Market", Story of 1 Parachute Brigade, Consolidated Report by Brigadier Lathbury, 31<sup>st</sup> October 1944, p. 3; WO 171/592 War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix D: Diary of Events, 3<sup>rd</sup> Parachute Battalion, September 1944, p. 2; Urquhart, *Arnhem*, pp. 40, 45; Ryan, *A Bridge Too Far*, p. 233.

<sup>398</sup> WO 171/592 War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix B: Diary of Events, 1<sup>st</sup> Parachute Battalion, 18<sup>th</sup> September 1944, p. 1-2.

Battalion, which had a relatively easy D-Day, facing only scattered skirmishes with German patrols and outposts on the way to the bridge along the relatively undefended Lion Route, reported about 60 casualties by the morning of the 18<sup>th</sup>.<sup>399</sup> Clearly even relatively small numbers of German infantry had the firepower necessary to put up a very tough and effective defence.

This firepower was a central factor in the effectiveness of the delaying action waged by Sturmbannführer Krafft's force on the afternoon of the 17<sup>th</sup>, serving as a very effective force multiplier. Though only fielding a handful of companies with an initial total of just over 300 men, who were spread thinly across more than a mile of front between the two main roads to Arnhem, the firepower wielded by Krafft's relative handful of trainees allowed their thin line to stop cold the advance of two full strength battalions of the 1<sup>st</sup> Parachute Brigade (with a strength of around 600 men each), as well as the 1<sup>st</sup> Airborne Reconnaissance Squadron (with about 270 men), for several critical hours. Krafft's report later singled out the 16<sup>th</sup> Battalion's heavy weapons as having played a central role in the unit's defensive victory.<sup>400</sup> Krafft's firepower ensured that the 1<sup>st</sup> Parachute Brigade was never able to effectively break through his defensive front and was only able to continue the advance when the 3<sup>rd</sup> Battalion managed to bypass his dangling southern flank, forcing him to retreat to avoid being encircled.<sup>401</sup>

Once the bulk of Kampfgruppe Spindler got into position in the outskirts of Arnhem during the night of the 17<sup>th</sup>/18<sup>th</sup>, establishing a near continuous firing line from the Ede-Arnhem railroad in the north to the banks of the Lower Rhine in the south, it became all but impossible for the 1<sup>st</sup> Airborne Division's attack to make any further progress. Even the strongest attacks by the paratroopers usually netted only a block or two of gains at best, and usually only at considerable cost. Brigadier Lathbury later reported that, after spending the 18<sup>th</sup> trying to break through the German lines in the face of severe machine gun and mortar fire from elevated positions along a railway embankment, the 1<sup>st</sup> and 3<sup>rd</sup> Parachute Battalions

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<sup>399</sup> WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division, Annexure P: Copy of Pigeon Message received at Airborne Troops HQ (Rear) on September 26<sup>th</sup> – dispatched on Sept 18<sup>th</sup>*, p. 1.

<sup>400</sup> WO 205/1124 *Battle of Arnhem, SS Panzer Grenadier Depot & Reserve Battalion 16 – German War Diary*, pp. 7, 22-23.

<sup>401</sup> WO 205/1124 *Battle of Arnhem, SS Panzer Grenadier Depot & Reserve Battalion 16 – German War Diary*, pp. 10-11.

managed to advance only about 300 yards, while being reduced to about 150 men apiece.<sup>402</sup> The final push on the morning of the 19<sup>th</sup> by the 1<sup>st</sup>, 3<sup>rd</sup>, and 11<sup>th</sup> Parachute Battalions, along with the 2<sup>nd</sup> Battalion, The South Staffordshire Regiment, quickly ran into what Private James Edwards of the South Staffs described as a “shooting gallery”, and historian Wilhelm Tieke as a “steel wall.”<sup>403</sup> With Kampfgruppe Spindler having established machine gun and mortar positions in and around fortified buildings all along the main north south-road passing through western Arnhem, as well as on high ground to both the north and the south, allowing them to engage the British battalions both frontally and with enfilading fire from both flanks, every street and open space between the buildings became a virtually impassable “no man’s land.” Private Edwards later described his own D Company as having become pinned down almost immediately after the attack began, with the company’s commander and second in command both trying, with limited success, to get the attack moving again before both being hit themselves; when the remnants of the company fell back to rally in the cover of nearby buildings shortly thereafter, Edwards reported that only about 20% of the men that had started the attack were present to answer the roll call.<sup>404</sup> Thus, the high level of firepower allocated to German infantry units - a result of their doctrinal emphasis on infantry being able to operate independently if needed – allowed the depleted forces of the II SS Panzer Korps to throw up a virtually impenetrable wall of firepower around Arnhem with only a few weak infantry units, despite the near total absence of heavy artillery or air support. After the first night of fighting, not a single British unit managed to effectively penetrate this line and their continuing efforts to do so effectively destroyed them within two days of their landings.

This firepower continued to be used with considerable effect even as the initiative shifted in the wake of the failed British attacks and the German forces took up the offensive themselves. With the surviving British airborne troops having rapidly entrenched themselves in a tight perimeter around the Arnhem suburb of Oosterbeek, the German forces north of the Lower Rhine – under

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<sup>402</sup> WO 171/592 *War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix A: Operation “Market”, Story of 1 Parachute Brigade, Consolidated Report by Brigadier Lathbury*, 31<sup>st</sup> October 1944, pp. 7-8.

<sup>403</sup> Quoted in Ryan, *A Bridge Too Far*, p. 323; Tieke, *In the Firestorm of the Last Years of the War*, p. 246.

<sup>404</sup> Ryan, *A Bridge Too Far*, p. 323.

Obersturmbannführer Walter Harzer of the 9<sup>th</sup> SS on the eastern side of the British perimeter and General Hans von Tettau to the west - faced a considerably more difficult task in “digging them out” and destroying the pocket before it could be relieved. After a few costly early infantry assaults on the pocket, the German commanders realized that the bulk of their hastily improvised forces lacked the level of training need to conduct such an assault in a cost-effective manner and thus turned instead largely to bombarding the British into submission.<sup>405</sup> The German forces in the area had only a relatively limited complement of artillery to support such a “siege” action, but the German command proved quite effective in making the most of that which it did have. By the 20<sup>th</sup>, every available gun, including numerous heavy flak guns brought up from the Reich’s air defences, had been concentrated under a single central headquarters, Artillerie Kommando (Arko) 191, to direct the bombardment of Oosterbeek.<sup>406</sup> Despite having relatively few guns, with an initially reported eighteen 10.5 cm howitzers later rising to a claimed total of thirty 10.5 cm and four 15 cm howitzers, twenty heavy flak guns, twelve heavy (15 cm) infantry guns, ten heavy mortars, and ten heavy Nebelwerfer rocket launchers, Arko 191, backed by a plentiful supply of ammo secured by the logistical efforts of Army Group B’s headquarters, proved a significant force in the latter part of the fighting around Arnhem, Oosterbeek, and the Island, claiming to have fired a total of between 800 and 2,100 shots per day during the latter stages of the battle, and to have successfully engaged numerous targets and supported the efforts of Kampfgruppe Spindler with their fire.<sup>407</sup> Kampfgruppe Spindler, in turn, commented on the value of this concentrated artillery support in their efforts to crush the Oosterbeek perimeter, with Arko 191’s fire suppressing or destroying several

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<sup>405</sup> WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division, Intelligence Summary No. 4*, 22<sup>nd</sup> September 1944, p. 1; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division, Report on German Troops in the Arnhem Area 17-23 Sep 44*, Capt PAH Hodgson, 1<sup>st</sup> AB Div IO, 27<sup>th</sup> September 1944, p. 2; Middlebrook, *Arnhem 1944*, p. 352; Reynolds, *Sons of the Reich*, p. 160.

<sup>406</sup> BA/MA RS 2-2/32 *Zusammengefaßter Bericht des II. SS-Pz. Korps über die Kämpfe in Raume Arnhem, mit 3 Kartenskizzen*, 10.9 – 15.10 1944, p. 6; Kershaw, *“It Never Snows in September,”* p. 230.

<sup>407</sup> BA/MA RS 3-9/45 *Tagesmeldung von Artillerie-Regiment 191 an 9. SS-Pz Division*, 1300, 23.9.44; BA/MA RS 3-9/45 *Tagesmeldung von Artillerie-Regiment 191 an 9. SS-Pz Division*, 24.9.44; BA/MA RS 3-9/45 *Tagesmeldung von Artillerie-Regiment 191 an 9. SS-Pz Division*, 1900, 25.9.44; BA/MA RS 3-9/45 *Tagesmeldung von Artillerie-Regiment 191 an 9. SS-Pz Division*, 1900, 26.9.44.

British strongpoints that were holding up their advance.<sup>408</sup> General Bittrich later singled out Arko 191 for praise in his after action report, as one of the most effective elements of his forces.<sup>409</sup>

However, given Arko 191's relatively limited complement of artillery pieces, the humble, but readily available, infantry mortar became the primary means by which the German assault on the Oosterbeek perimeter was carried out. Despite their relatively small size, simplicity (being essentially just a tube with an attached baseplate and some sort of elevating mechanism), and relatively short range, mortars were extremely efficient and effective weapons, being cheap to produce in quantity, easy to use, and capable of putting out a considerable volume of high explosive firepower.<sup>410</sup> The standard German 8cm Granatwerfer (literally "shell thrower") 34 medium mortar could fire its 7.5 lb bombs at a rate of about fifteen per minute, while the 12 cm schwere (heavy) Granatwerfer 42, copied from a Soviet design, fired 34.83 lb bombs (heavier and more powerful than the 32.66 lb shell of the standard 10.5cm field howitzer) at a similar rate.<sup>411</sup>

By this stage of the war, the German Army was already well known amongst the Allied forces for the number of its mortars and the skill of their gunners. Interviews conducted in the wake of the Normandy campaign found that Commonwealth medical officers attributed about 70% of the wounds they treated to mortar fire, while another study conducted in Tunisia in 1943 concluded that the experience of mortar fire was responsible for about 40% of the total psychological casualties suffered in that campaign.<sup>412</sup> An account from the King's Company of the 1<sup>st</sup> (Motor) Battalion of the Grenadier Guards noted that being subjected to heavy, accurate mortar fire was "a persistent feature of all our attacks" in Normandy.<sup>413</sup>

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<sup>408</sup> BA/MA RS 3-9/45 *Ia-Tagesmeldung von Kampfgruppe Spindler an SS-Panzerdivision Hohenstaufen, vom 23.9, 1830 bis 24.9.1900.*

<sup>409</sup> BA/MA RS 2-2/32 *Zusammengefaßter Bericht des II. SS-Pz. Korps über die Kämpfe in Raume Arnheim, mit 3 Kartenskizzen*, 10.9 – 15.10 1944, p. 9.

<sup>410</sup> Bull, *World War II Infantry Tactics: Company and Battalion*, p. 22.

<sup>411</sup> Norris, *Infantry Mortars*, pp. 23-24, 33; Hogg, *German Artillery of World War Two*, p. 45.

<sup>412</sup> Terry Copp, "Counter-mortar Operational Research in the 21 Army Group," *Canadian Military History* 3, No. 2 (1994), p. 4; French, *Raising Churchill's Army*, p. 88.

<sup>413</sup> WO 171/1253 *War Diary 1<sup>st</sup> (Motor) Grenadier Guards*, Appendix A: "The King's Company – July to September 1944, p. 2.

As mentioned above, German mortars, often as the only “artillery” available at the time, were prominent in the defence against initial British offensive. They would play an even larger role in subsequent German counteroffensive, with the entrenched British forces being subjected to heavy mortar barrages several times daily from a point almost immediately after the initial formation of the perimeter on the evening of the 19th. Descriptions of these steadily intensifying daily mortar barrages (called the “morning hate,” a term that harkened back to the prolonged bombardments of the First World War) on the 1<sup>st</sup> Airborne Division’s positions are conspicuous throughout the war dairies of all the units present during the siege.<sup>414</sup> Beyond the general area bombardments, the German forces also used their mortars for observed fire against strong points identified by forward observers, as well as for harassing the Allied forces on the south bank of the Lower Rhine and their efforts to establish a crossing; the mortar observation posts also kept in close contact with Arko 191, allowing them to call down heavier fires when needed.<sup>415</sup>

Though this shelling did relatively little physical damage to the well-dug in airborne troops considering the heavy weight of fire, it still had a considerable effect on the defence. For one, the steady barrages kept the British troops largely pinned within their entrenchments for the majority of the siege, effectively preventing much in the way of counteroffensive action or maneuver on any notable scale during the daylight hours, with even the simplest of actions, such as digging or improving trenches, severely hampered by the fire.<sup>416</sup> As such, the 1<sup>st</sup> Division was forced to conduct an almost entirely passive defence, with its various sub-units doing little more than holding their own trench and foxhole

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<sup>414</sup> WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division*, 20<sup>th</sup> to 24<sup>th</sup> September 1944; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division – 1 Air Landing Bde – Operation Market*, 17<sup>th</sup> to 26<sup>th</sup> Sept 1944, Annexure O.2, pp. 11-12; WO 171/594 *War Diary HQ 4<sup>th</sup> Parachute Brigade*, Appendix C: *Copy of Diary Kept by Brigadier J.W. Hackett, Commander, 4 Parachute Brigade*, 2<sup>nd</sup> October 1944, p. 10; WO 171/1236 *War Diary 1<sup>st</sup> Battalion The Parachute Regiment*, 22<sup>nd</sup> September to 24<sup>th</sup> September 1944, p. 4; WO 171/1244 *War Diary 11<sup>th</sup> Battalion The Parachute Regiment*, Appendix A: *Account of Arnhem Battle, 11th Bn the Parachute Regiment*, by Lt. JE Blackwood, 22<sup>nd</sup> September to 25<sup>th</sup> September 1944; WO 171/589 *War Diary HQ 1<sup>st</sup> Airlanding Brigade*, Appendix A - *Operation Market*, 20<sup>th</sup> September 1944.

<sup>415</sup> BA/MA RS 3-9/45 *la-Tagesmeldung von Kampfgruppe Krafft an 9. SS-Panzerdivision “Hohenstaufen,”* 25.9.44.

<sup>416</sup> WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division – 1 Air Landing Bde – Operation Market*, 17<sup>th</sup> to 26<sup>th</sup> Sept 1944, Annexure O.2, pp. 9,14; WO 171/406 *War Diary 1<sup>st</sup> Airborne Reconnaissance Squadron*, *Squadron HQ*, 20<sup>th</sup> to 25<sup>th</sup> September 1944.

lines, while the Germans were able to maneuver their forces relatively freely around the perimeter to make concentrated attacks. Though the Germans made only slow progress, without any capacity for effective maneuver or counterattack, the 1<sup>st</sup> Airborne Division was deprived of any real possibility of defeating or breaking out of the encirclement, ensuring that their own defeat was just a matter of time.

Furthermore, the bombardments also had a considerable cumulative effect upon the defenders. Several British accounts and war diaries conceded that the steady rain of mortar fire quickly began to take a toll of even the superb morale and discipline of the British airborne troops, with many noting the units exhibiting significant signs of severe mental strain and exhaustion after a few days under the intense shelling.<sup>417</sup> In light of this severe psychological stress, it is hardly surprising that the 1<sup>st</sup> Airborne Division began to suffering from the loss of a steadily increasing stream of men who simply “had enough”, and began to leave the front lines to seek shelter with the wounded in local cellars, or simply wander around the woods in a shell-shocked daze.<sup>418</sup> Though some of these men were rallied and returned to the line by the efforts of officers and NCOs, others were simply too burnt out to fight on. On top of this, the sheer volume of flying fragments ensured that, even considering the strong defensive positions the British had constructed, the mortar fire took a steady toll of British strength each day. Particularly hard hit were the division’s officers, who had to spend more time in the open moving between their various sub-units; Brigadier Hackett and Lieutenant Colonel Thompson were among the large number of officers put out of action by mortar fire, both being seriously wounded.<sup>419</sup>

Beyond these casualties, the bombardment also inflicted a significant amount of meaningful material damage upon the 1<sup>st</sup> Division, igniting several ammunition dumps, crippling communications within the perimeter by cutting cable lines and damaging the battery charging stations for the unit’s

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<sup>417</sup> Urquhart, *Arnhem*, pp. 146-47, 161; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division*, 23<sup>rd</sup> September 1944; WO 171/594 *War Diary HQ 4<sup>th</sup> Parachute Brigade, Appendix C: Copy of Diary Kept by Brigadier J.W. Hackett, Commander, 4 Parachute Brigade*, 2<sup>nd</sup> October 1944, 23<sup>rd</sup> September 1944, p. 10; Ryan, *A Bridge Too Far*, p. 435.

<sup>418</sup> Powell, *The Devil’s Birthday*, p. 189; Ryan, *A Bridge Too Far*, p. 449.

<sup>419</sup> Urquhart, *Arnhem*, pp. 125, 153; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division*, 24<sup>th</sup> September; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division – 1 Air Landing Bde – Operation Market*, 17<sup>th</sup> to 26<sup>th</sup> Sept 1944, Annexure O.2, pp. 8,11; WO 171/594 *War Diary HQ 4<sup>th</sup> Parachute Brigade, Appendix C: Copy of Diary Kept by Brigadier J.W. Hackett, Commander, 4 Parachute Brigade*, 2<sup>nd</sup> October 1944, 21<sup>st</sup> and 23<sup>rd</sup> September, pp. 8, 12.

radios, and destroying the bulk of the Royal Army Service Corps jeeps that were used to distribute the already limited and steadily dwindling supplies of ammunition.<sup>420</sup> This steady rain of fire from the numerous mortars available to the German infantry units at Arnhem thus played a significant role in crippling the 1<sup>st</sup> Airborne Division's fighting power throughout the fighting around Oosterbeek; though the Germans were unable to quickly finish off the still-determined British troops, their efforts rendered them largely ineffective as a combat unit. Furthermore, the fact that the bombardment of the Oosterbeek pocket relied primarily upon mortars rather than heavy guns limited the ability of the British to effectively counter their firepower with their own artillery. Even with the significant firepower of the 64<sup>th</sup> Medium Regiment and other XXX Corps guns available from the 21<sup>st</sup> onwards, the 1<sup>st</sup> Airborne Division was unable to effectively direct their fire onto the German mortars, as their forward observers were unable to locate the small weapons, which could easily be dug into concealed pits and produced a relatively limited muzzle flash, and the 1<sup>st</sup> Airborne Division lacked a more specialized mortar detection unit.<sup>421</sup>

A similar situation to that at Oosterbeek also took place in the "last stand" of the smaller British force at Arnhem Bridge. There too, the Germans turned to a steady mortar bombardment once their initial infantry attacks were repulsed, with the shelling keeping Lieutenant Colonel Frost's troops pinned within the buildings they had fortified, and inflicting a steady trickle of losses despite that strong cover. Frost himself was seriously wounded by a mortar burst early in the afternoon of the 20<sup>th</sup>, as was Private Sims.<sup>422</sup> On the whole, the firepower possessed by the German infantry units that fought against Operation Market Garden proved a more than adequate substitute for their shortage of artillery or air power. On both the defensive and the offensive, the Germans large numbers of high-quality machine guns and mortars allowed them to almost invariably lay down superior fire over their British opponents in the numerous small unit clashes that characterized the fighting, particularly with the British unable to effectively

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<sup>420</sup> WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division – Report on Operation "Market", Arnhem 17-26 Sept. 1944*, 10<sup>th</sup> January 1945, p. 21, 41-42, 47.

<sup>421</sup> WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division, Annexure R: Report by CRA 1 Airborne Division on Operation Market, Part II, Conclusions with Regard to Future Operations*, p. 4.

<sup>422</sup> Sims, *Arnhem Spearhead*, pp. 85-90, 106-7; WO 171/592 *War Diary 1<sup>st</sup> Parachute Brigade, Operation Market – Outline of Events, Appendix A: Diary of Events, 1 Para Bde HQ*, pp. 4-5, 7-8; Harvey, *Arnhem*, p. 90.

compensate for the superiority of German infantry firepower by calling upon their own advantages of artillery and airpower, as they had done so successfully in Normandy. With both sides largely denied the effective use of heavy weapons or air support in the circumstances that prevailed during Operation Market-Garden, the superior firepower allocated to German infantry by a doctrine that continued to see infantry as having a decisive, rather than merely supporting, role in modern warfare proved to be a vital advantage.

This infantry firepower was also usefully supplemented by the limited German armoured forces deployed to the battle. Though the Germans had relatively few tanks or other heavy armoured fighting vehicles (AFVs) at their disposal through the majority of the Market-Garden fighting, with less than 100 in the entirety of Army Group B at the start of the operation, they did manage to effectively use those they did have by deploying them to provide direct fire support to their infantry forces.<sup>423</sup> As stated earlier in the chapter, the Normandy fighting left the II SS Panzer Korps fighting at Arnhem with only a handful of AFVs, about sixteen to thirty-five tanks and Sturmgeschütze (StuGs - assault guns – essentially turretless tanks with their main guns in a limited traverse hull mounting), and about 70 assorted half-tracks and armoured cars. Only limited armoured reinforcements were available to join this SS armoured force through the early days of the battle. The understrength 280<sup>th</sup> StuG Brigade, with only about ten operational StuGs, arrived at Arnhem and joined the SS force on the 19<sup>th</sup>, with another eight mostly older-model tanks that had been part of a training unit at Bielefeld also arriving on the 19<sup>th</sup> as part of Kampfgruppe Knaust.<sup>424</sup> Field Marshal Model did later manage to get a full heavy tank battalion, the newly refitted 506<sup>th</sup> schwere Panzer Abteilung, equipped with 45 powerful and factory fresh Tiger II heavy tanks, assigned to the II SS Panzer Korps, but this only arrived on the 24<sup>th</sup>, after much of the decisive phase of the fighting was already over.<sup>425</sup>

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<sup>423</sup> Harclerode, *Arnhem: A Tragedy of Errors*, p. 35.

<sup>424</sup> BA/MA RH 19 IX/5 *Fernschrieben von Oberkommando der Heeresgruppe B an II. SS-Panzer Korps*, 1930, 18<sup>th</sup> September 1944; Harvey, *Arnhem*, p. 103; Kershaw, *"It Never Snows in September,"* p. 134; Harclerode, *Arnhem: A Tragedy of Errors*, p. 95; Reynolds, *Sons of the Reich*, pp. 129, 137.

<sup>425</sup> Harvey, *Arnhem*, pp. 159, 171; Harclerode, *Arnhem: A Tragedy of Errors*, p. 129; Kershaw, *"It Never Snows in September,"* p. 274.

Lacking the effective numbers to conduct anything like the massed German Panzer offensives of the early war, most of the armour available to II SS Panzer Korps for Market Garden was parceled out to provide close support to the various infantry battle groups, with a few being attached to each group; the StuGs of the 280<sup>th</sup> Brigade, for example, were attached to the various sub-groups of Kampfgruppe Spindler.<sup>426</sup> During the British offensive, these AFVs provided a valuable source of highly mobile and protected firepower, able to maneuver to various “crisis points” as they developed and add the fire of their own guns, cannon, and machine guns to that of the infantry. During their advance on the 17<sup>th</sup> and 18<sup>th</sup>, the troops of the 1<sup>st</sup> Parachute Brigade were frequently engaged by small groups of tanks, armoured cars, and half-tracks from the 9<sup>th</sup> SS Panzer Division conducting “hit and run” attacks along the main roads, inflicting losses and delaying the advance, as was the case with German machine gun and mortar fire.<sup>427</sup>

These armoured “fire groups” proved even more critical to the Germans’ defensive success on the 19<sup>th</sup>. On the 4<sup>th</sup> Parachute’s Brigade’s front, the presence of a contingent of reconnaissance and flak half-tracks bearing 20mm guns during the attack by the 10<sup>th</sup> and 156<sup>th</sup> Battalions played a central role in the defeat of that attack, decimating two companies of the 156<sup>th</sup> Battalion and pinning down the 10<sup>th</sup>, effectively taking them out of the fight.<sup>428</sup> Similarly, half-tracks of the 9<sup>th</sup> SS Reconnaissance Battalion, which had taken up positions in a brickworks on the south bank of the Lower Rhine in the wake of a failed attack across Arnhem bridge on the 18<sup>th</sup>, found themselves ideally positioned to fire in enfilade into the open right flank of the main British attack along the river bank of the 19<sup>th</sup>, inflicting devastating casualties on the 1<sup>st</sup> and 3<sup>rd</sup> Parachute Battalions.<sup>429</sup>

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<sup>426</sup> Kershaw, *“It Never Snows in September,”* pp. 170, 238-39; Harclerode, *Arnhem: A Tragedy of Errors*, p. 91.

<sup>427</sup> WO 171/592 War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix A: Operation “Market”, Story of 1 Parachute Brigade, Consolidated Report by Brigadier Lathbury, 31<sup>st</sup> October 1944, pp. 5-6; WO 171/592 War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix B: Diary of Events, 1<sup>st</sup> Parachute Battalion, September 1944, p. 1; WO 171/592 War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix D: Diary of Events, 3<sup>rd</sup> Parachute Battalion, September 1944, p. 2.

<sup>428</sup> WO 171/594 War Diary HQ 4<sup>th</sup> Parachute Brigade, Appendix C: Copy of Diary Kept by Brigadier J.W. Hackett, Commander, 4 Parachute Brigade, 2<sup>nd</sup> October 1944, p. 3; WO 171/1247 War Diary 156<sup>th</sup> Battalion The Parachute Regiment, Appendix C: Account of Operation Market Garden, 19<sup>th</sup> September 1944, pp. 1-2; Harvey, *Arnhem*, pp. 107-8; Harclerode, *Arnhem: A Tragedy of Errors*, pp. 91-92; Kershaw, *“It Never Snows in September,”* pp. 174-75.

<sup>429</sup> CAB 106/1078 *The South Staffordshires in the Battle of Arnhem*, p. 22; WO 171/393 War Diary HQ 1<sup>st</sup> Airborne Division, Report on German Troops in the Arnhem Area 17-23 Sep 44, Capt PAH Hodgson, 1<sup>st</sup> AB Div IO, 27<sup>th</sup>

In the subsequent German counteroffensive against the 1<sup>st</sup> Airborne Division, these small armoured forces served largely as a mobile source of direct fire artillery, standing off from the British forces and using the superior range and firepower of their guns to engage their defensive positions with relatively little risk of retaliation. Such fire proved particularly effective as the British troops made heavy use of local structures as defensive positions; the sturdy stone and brick-built Dutch houses generally proved quite resistant to small arms fire and even mortar bombs, but quickly collapsed under sustained direct fire from tanks or self-propelled guns.<sup>430</sup> This AFV fire played a decisive role in the defeat of the 2<sup>nd</sup> Parachute Battalion force at Arnhem Bridge. From the 18<sup>th</sup> onwards, the tanks of Kampfgruppe Knaust methodically destroyed the buildings around the north end of the bridge occupied by the force of paratroops one by one; by the end of the siege the British had been driven back almost entirely into a single building, the destruction of which effectively put an end to meaningful resistance.<sup>431</sup>

The effectiveness of the fire of German tanks and StuGs against structures was also a central factor in the success of the German counteroffensive against the main body of the 1<sup>st</sup> Airborne Division. The StuGs of the 280<sup>th</sup> Brigade were prominent in the German counterattack on the 19<sup>th</sup> that effectively routed and destroyed the British attack force that had stalled in the face of Kampfgruppe Spindler's fire. Where the surviving British troops were driven to take cover in the local houses by the German infantry's machine gun and mortar fire, the StuGs were able to advance along adjacent streets and engage these improvised "strongholds" with gun fire, quickly forcing most of the British troops to surrender or flee for

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September, p. 2; Harvey, *Arnhem*, pp. 103-6; Harclerode, *Arnhem: A Tragedy of Errors*, p. 90; Kershaw, *"It Never Snows in September,"* p. 169.

<sup>430</sup> WO 171/592 War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix C: Diary of Events, 2<sup>nd</sup> Parachute Battalion, September 1944, p. 2; Powell, *The Devil's Birthday*, p. 105.

<sup>431</sup> WO 171/366 War Diary 1<sup>st</sup> Airborne Corps HQ, Appendix J – Summary of Statement by Lt. D.J. Simpson, RE, 1<sup>st</sup> Parachute Battalion, 23<sup>rd</sup> September 1944; WO 171/393 War Diary HQ 1<sup>st</sup> Airborne Division – Report on Operation "Market", Arnhem 17-26 Sept. 1944, 10<sup>th</sup> January 1945, pp. 6, 12; WO 171/592 War Diary HQ 1<sup>st</sup> Parachute Brigade, Operation Market: Outline of Events, 1<sup>st</sup> Parachute Brigade, pp. 5, 7-8; WO 171/592 War Diary HQ 1<sup>st</sup> Parachute Brigade, Appendix A: Operation "Market", Story of 1 Parachute Brigade, Consolidated Report by Brigadier Lathbury, 31<sup>st</sup> October 1944, pp. 9-10; Kershaw, *"It Never Snows in September,"* pp. 177-80; Middlebrook, *Arnhem 1944*, pp. 301-6.

their lives.<sup>432</sup> In the following German push against the Oosterbeek perimeter, the AFVs attached to each German Kampfgruppe once again directed the bulk of their fire against the various structures that the troops of the 1<sup>st</sup> Division had occupied as strongpoint within the position. This fire soon rendered the numerous sturdy houses and villas scattered through the Oosterbeek area almost entirely untenable as defensive positions, as they were easily spotted, engaged from range, and provided virtually no protection against high-velocity shells.<sup>433</sup> Brigadier Hackett later described these structures as a “snare” for the defenders: seemingly tempting as positions, but actually a liability.<sup>434</sup>

The relatively meagre force of armour that joined the offensive efforts of II SS Panzer Korps against the Oosterbeek perimeter were thus able to almost entirely deny a considerable potential defensive asset to the 1<sup>st</sup> Airborne Division by eliminating a large number of “ready-made” strongpoints that could have provided the British infantry with a considerable degree of additional protection against the small arms and mortar fire of the German infantry. As such, though unable to make an independent contribution to the battle, the few AFVs available to the German forces at Arnhem added considerably to the offensive capabilities of the infantry forces into which they were integrated. Though the 1<sup>st</sup> Airborne Division’s considerable contingent of anti-tank weaponry – including forty-eight 6-pdr and eleven 17-pdr anti-tank guns and a large number of hand-held PIATs (Projector, Infantry, Anti-Tank) – made these efforts fairly costly for the German armour, with Kershaw estimating approximately 50% of the AFVs committed

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<sup>432</sup> CAB 106/1078 *The South Staffordshires in the Battle of Arnhem, Account of 1<sup>st</sup> PARA*, p. 19; CAB 106/1078 *The South Staffordshires in the Battle of Arnhem, Account of 11 Para Bn – Lt. Col. Lee*, p. 13; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division – Report on Operation “Market”, Arnhem 17-26 Sept. 1944*, 10<sup>th</sup> January 1945, pp. 13-14; WO 171/1244 *War Diary 11<sup>th</sup> Battalion The Parachute Regiment, Appendix A: Account of Arnhem Battle, 11th Bn the Parachute Regiment*, by Lt. JE Blackwood, 19<sup>th</sup> September 1944; Middlebrook, *Arnhem 1944*, pp. 201-5.

<sup>433</sup> WO 171/341 *War Diary HQ 30 Corps Intelligence Summary No. 507*, 2359, 24<sup>th</sup> September; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division – 1 Air Landing Bde – Operation Market, 17<sup>th</sup> to 26<sup>th</sup> Sept 1944, Annexure O.2*, p. 12; WO 171/594 *War Diary HQ 4<sup>th</sup> Parachute Brigade, Appendix C: Copy of Diary Kept by Brigadier J.W. Hackett, Commander, 4 Parachute Brigade*, 2<sup>nd</sup> October 1944, pp. 9-10; WO 171/1016 *War Diary 1<sup>st</sup> Airlanding Light Regiment RA, Report by Lt. Col. Thompson*, 20<sup>th</sup> September 1944, p.2; WO 171/1248 *War Diary 21<sup>st</sup> Independent Parachute Company*, 22<sup>nd</sup> September 1944, p.3; WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division – Report on Operation “Market”, Arnhem 17-26 Sept. 1944*, 10<sup>th</sup> January 1945, p. 19.

<sup>434</sup> WO 171/594 *War Diary HQ 4<sup>th</sup> Parachute Brigade, Appendix C: Copy of Diary Kept by Brigadier J.W. Hackett, Commander, 4 Parachute Brigade*, 2<sup>nd</sup> October 1944, 23<sup>rd</sup> September 1944, p. 10.

being disabled or destroyed during the battle, the British were nonetheless unable to prevent those AFVs from playing a considerable role in their eventual defeat.<sup>435</sup>

Overall, the German Army proved extremely effective in making the best use of the firepower resources it had at hand during Operation Market Garden, with even badly weakened, hastily improvised, or second-rate troops able to employ the numerous machine guns and mortars with which they were equipped to decisively defeat almost every British offensive effort towards Arnhem. These forces were then, with the assistance of a handful of tanks and self-propelled guns, able to effectively retake the initiative and commence a counteroffensive that decisively defeated their opponents. Though remnants of the 1<sup>st</sup> Airborne Division were eventually able to escape, the fact that only 2,163 men remained out of the nearly 10,000 that had originally landed west of Arnhem on the 17<sup>th</sup> and 18<sup>th</sup> serves as a testament to the level of firepower that was brought to bear against them by the German defenders.

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<sup>435</sup> WO 171/393 *War Diary HQ 1<sup>st</sup> Airborne Division*, "British Guns Landed," September 1944; Kershaw, "It Never Snows in September," pp. 274-76.

## CHAPTER 8: CONCLUSION

Almost as soon as the few exhausted survivors of the 1<sup>st</sup> Airborne Division had returned across the Rhine, many among the Allied leadership began a concerted effort to whitewash the Market Garden campaign, arguing notable positive results had been achieved almost everywhere except at Arnhem, and that the campaign had advanced the Allied front lines nearly 60 miles across several major waterways, putting them in a much stronger position to resume the campaign in the new year than they had been before it was launched. Montgomery himself famously declared the operation as having been “ninety per cent successful,” emphasizing the considerable strategic value of the bridgehead obtained at Nijmegen and later assuring Urquhart that the 1<sup>st</sup> Airborne’s fate was not a defeat, but rather a noble courageous sacrifice that had in turn enabled valuable successes elsewhere, a sentiment echoed by Generals Dempsey, Horrocks, and Browning.<sup>436</sup> Montgomery further argued that the operation only failed due to factors entirely beyond his control, citing the weather and its effects upon air operations as the primary cause of the failure, a sentiment that was later echoed by Eisenhower himself.<sup>437</sup>

General Brereton similarly asserted that the operation had been an almost unbroken series of successes for the 1<sup>st</sup> Allied Airborne Army, calling it a “brilliant success.” Brereton noted that the transport commands had been entirely successful in dropping the largest airborne force ever assembled safely and accurately on the planned landing zones, and that the American airborne divisions, at least, had secured all the objectives assigned to them (conveniently downplaying the setbacks at Son, Best, and Nijmegen). Brereton argued that the only dark cloud on the operation’s silver lining was fact that the ground forces of the 2<sup>nd</sup> Army had been unable to make the final link up with the 1<sup>st</sup> Airborne Division –

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<sup>436</sup> Montgomery, *El Alamein to the River Sangro/Normandy to the Baltic*, pp. 324-26; WO 171/393 War Diary HQ 1<sup>st</sup> Airborne Division, Annexure P: Letter from Montgomery to Urquhart, 28<sup>th</sup> Sept 1944, Letter from Dempsey to Urquhart, 29<sup>th</sup> Sept 1944, Letter from Horrocks to Urquhart, 26<sup>th</sup> Sept 1944, Letter from Browning to Urquhart, 26<sup>th</sup> Sept 1944; WO 205/623 Operational Reports Market Garden, October 1944-January 1945, Appendix A: Comments on Report on Operation Market-Garden, Lessons, Operation “Market-Garden,” 10<sup>th</sup> December 1944.

<sup>437</sup> Montgomery, *El Alamein to the River Sangro/Normandy to the Baltic*, pp. 324-25; Eisenhower, *Crusade in Europe*, p. 349.

with regards to his own air and airborne forces, he claimed that matters had gone entirely according to plan and with fewer losses than expected.<sup>438</sup>

In spite of these sunny assertions by the senior Allied leadership, the simple fact was that Market Garden had entirely failed to achieve the principle operational and strategic objective for which it had been laid down. Without the sought after bridgehead over the Rhine, all the Allies had won was a salient into Holland that greatly extended their front lines and exposed the troops holding it to further German counterattacks. Persistent German attacks on this salient through October and into November ensured that Montgomery had to keep the two American airborne divisions in the front line for over a month (in spite of the general policy to avoid wasting such highly trained and expensive specialist forces in extended service as mere foot infantry), during which time they suffered more casualties than they had during Market Garden itself.<sup>439</sup> As historian Michael Reynolds notes, the thrust that had been intended to obtain a highway into the heart of the Reich, in the end, “led nowhere.”<sup>440</sup>

Moreover, the Allies paid a stiff price to achieve these meagre results. According to the official post-operation counts, Market Garden cost the 1<sup>st</sup> Airborne Division 281 men killed, 135 wounded and evacuated, and a shocking 6,041 missing, most of whom would spend the rest of the war as German prisoners. To these can be added 59 dead, 35 wounded, and 644 missing British Glider Pilots – nearly all of whom fell while fighting on the ground as infantry after the landings – and 47 dead, 158 wounded, and 173 missing from the 1<sup>st</sup> Independent Polish Parachute Brigade, which dropped just south of the Lower Rhine on the 21<sup>st</sup> in a gallant, but futile effort to link up with the 1<sup>st</sup> Airborne. The American 82<sup>nd</sup> and 101<sup>st</sup> Airborne Divisions added another 530 dead, 2,038 wounded, and 974 missing to this grim tally, a clear testament to the ferocity of their own battles.<sup>441</sup> Finally, XXX Corps lost another 1,480 men killed wounded and missing, while the VIIIth and XIIth Corps to its flanks suffered nearly 4,000 further

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<sup>438</sup> Brereton, *The Brereton Diaries*, pp. 360-61.

<sup>439</sup> Montgomery, *El Alamein to the River Sangro/Normandy to the Baltic*, p. 323; WO 205/873 *Report on Operations “Market” and “Garden,” September to October 1944*, pp. 5, 19; Burgett, *The Road to Arnhem*, pp. 101-2; CAB 106/1054 *A Short History of 30 Corps in the European Campaign 1944-1945*, p. 39.

<sup>440</sup> Reynolds, *Sons of the Reich*, p. 174.

<sup>441</sup> WO 205/873 *Report on Operations “Market” and “Garden,” September to October 1944*, p. 5.

casualties in their own pushes to support XXX Corps' exposed flanks. Some recent works have suggested that losses may have been even higher than these early totals suggested, with Market Garden costing the Allies a grand total of perhaps 16,000 to 17,000 killed, wounded, and missing soldiers and airmen to all causes.<sup>442</sup> Though the Americans could and did replace their losses with relative ease, the fact that the bulk of the butcher's bill for Market Garden fell upon British troops made the failed offensive a harsh blow to a nation already at the very limits of its manpower, particularly as it failed to shorten the war as Montgomery had hoped. Whatever the true and precise cost of Market Garden, it proved to be a poor bargain.

Furthermore, it is quite questionable whether the operation could ever have achieved the lofty goals assigned to it, which several participants and commentators have argued justified the high risks inherent to the plan and the eventual losses.<sup>443</sup> Even if the 2<sup>nd</sup> Army had managed to reach Arnhem and establish the planned bridgehead on the banks of the Zuider Zee, it simply would not have been able to move immediately and decisively into the Ruhr as Montgomery had wished. With the Allied logistical situation still in dire straits, and the 2<sup>nd</sup> Army over a hundred miles further from its supply bases than it had been at the start of the operation, it likely would have been left all but crippled by shortages of ammunition and fuel in the aftermath of the initial thrust, leaving it hard pressed just to defend itself and hold the ground it had won, much less continue the offensive. Furthermore, with the Germans beginning to build up the powerful force that would later conduct the Ardennes offensive, such an isolated and overextended army would have represented a very tempting target for a counterattack that may well have succeeded where the "Battle of the Bulge" failed.<sup>444</sup> In the end, even under the best circumstances, the Allies would still have needed to prepare a large scale offensive effort to break out of whatever defensive cordon the Germans would have placed around the Zuider Zee bridgehead in the spring – much as they actually had to do to cross the Rhine in Operations Plunder, Varsity, and Flashpoint in March 1945. With such considerations in mind, Operation Market Garden begins to look less like a bold offensive gamble

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<sup>442</sup> Reynolds, *Sons of the Reich*, p. 173; Middlebrook, *Arnhem 1944*, pp. 438-39, 517.

<sup>443</sup> Middlebrook, *Arnhem 1944*, pp. 441-42; Horrocks, *A Full Life*, p. 332; Powell, *The Devil's Birthday*, p. 243.

<sup>444</sup> Harvey, *Arnhem*, pp. 26, 29; Ritchie, *Arnhem – Myth and Reality*, p. 115.

for the very highest of stakes, and more like an ill-considered and reckless effort to grasp at an opportunity that was never really there to begin with. Even General Horrocks, generally a staunch defender of Montgomery's decision to launch the operation, admitted that his forces may in the end have been lucky not to have gotten across the Rhine in light of the potential risks.<sup>445</sup>

The fact that the operation took place also had other consequences, both strategic and humanitarian. With the 21<sup>st</sup> Army Group's efforts and resources diverted from Eisenhower's original intention for it to fully secure and clear access to the port of Antwerp, it took more than a month of further hard fighting for the 1<sup>st</sup> Canadian Army to open the Scheldt Estuary and bring Antwerp into operation, ensuring the continuation of the post-Normandy supply crisis well into the fall. Far more serious were the consequences that Market Garden had for the people of the still occupied portions of Holland. In the wake of the Allied advance, and the support it received from the Dutch population and Underground, the German authorities enacted a severe reprisal policy, cutting food supplies to the people of western Holland, leading to the "Hunger Winter" that saw approximately 25,000 lives lost to starvation. It was therefore not merely Allied soldiers that paid the price of Market Garden's ambitions.<sup>446</sup>

Regardless of what came after, or what could or could not have been achieved, the simple fact is that Market Garden was defeated, and that this outcome was at least as much a matter of German success as it was of Allied failure. Though the specific decisions made by the commanders on both sides in the lead up to and course of the battle unquestionably had a considerable effect upon its conduct and outcomes, in many ways the results of Operation Market Garden were entirely predictable. Given the nature of the fighting that would result from such a plan, involving as it did deep operations by poorly supported airborne forces and an ostensibly bold and fast-moving mechanized advance, and the differing ways in which the opposing forces had been indoctrinated and trained to understand the nature of combat and conduct their battles, it is hardly surprising that, in the fighting in Holland in September 1944, the Germans excelled while the Allies, and particularly the British, struggled.

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<sup>445</sup> Horrocks, *A Full Life*, pp. 231-32.

<sup>446</sup> Reynolds, *Sons of the Reich*, p. 175.

Possessing as they did a long-standing military doctrine and culture that accepted the generally chaotic nature of battle and emphasized the vital role of bold, aggressive leadership and the independent exercise of initiative through well-developed tactical judgment and decision-making skills amongst all ranks in the army in mitigating the potential friction that such chaos could inflict upon combat operations, the Germans proved very well prepared for the surprise arrival of nearly 20,000 Allied airborne troops deep behind their already badly depleted lines. Guided by the principles of *Auftragstaktik*, which called upon subordinate commanders, and even individual junior officers, NCOs, and soldiers, to take action in the face of unexpected opportunities or threats on the battlefield, even in the absence of orders from above, the German forces in southeastern Holland mobilized and began to move to block or counterattack the Allied incursion with a speed that exceeded any Allied expectations, ensuring that the airborne forces at Arnhem, in particular, were entirely unable to carry out their set battle plans. In the face of this unexpected and disruptive level of resistance, the 1<sup>st</sup> Airborne Division's offensive towards Arnhem fragmented into a series of confused small-unit battles in which the Germans - better trained and prepared for such situations - seized and retained the upper hand, blunting the British thrust before decisively defeating it within 48 hours of the initial landings, in spite of the arrival of sizeable Allied reinforcements on the second day of the fighting. All along the corridor formed by the Allies airborne "carpet," similarly prompt and aggressive German reactions rapidly pushed the American troops further south onto the defensive, preventing the 82<sup>nd</sup> Airborne Division from capturing the critical bridges at Nijmegen for three crucial days, and keeping the overstretched forces of the 101<sup>st</sup> Airborne Division tied down fighting what was often a losing battle to keep the Allied forces vital lines of supply and communication open. The fact the German forces had long been trained to take action in the face of confusion and to seek out and confront the enemy wherever he could be found, even in the absence of specific instructions to do so, meant that the Allies were never able to take full advantage of the offensive initiative that their airborne drops had created, diverting the efforts of their forces to self-defence and slowing their offensive drive to a badly weakened crawl.

These German efforts were furthered enhanced by the fact that their doctrine had ensured that the infantry units that made up the great majority of the defending forces were very well provided with firepower. With their doctrine emphasizing the need for infantry to be able to conduct offensive operations without an extensive level of support from the artillery, German infantry units – down to even the level of individual companies, platoons, and squads, were extensively equipped with their own machine guns and mortars to allow them to engage, suppress, and defeat their enemy with their own firepower and maneuver. These weapons, supplemented by the effective employment of Army Group B's very limited supply of armoured fighting vehicles, proved to be a critical advantage for the German forces at Arnhem, allowing them to rapidly and effectively suppress and inflict crippling casualties upon the lightly armed and poorly supported British paratroops in almost every combat encounter, ensuring that, within two days of setting out, the 1<sup>st</sup> Airborne Division was reduced to a fraction of its original strength and forced entirely onto the defensive. Overall, Market Garden presented the German forces with a battle almost ideally suited to their particular talents.

Conversely, Market Garden proved almost entirely unsuited to the doctrine and capabilities of the British forces involved, despite the fact that it was their plan. Tied to a doctrine based upon carefully planned, slow, and cautiously conducted set-piece battles, and relying heavily upon the support of large centrally-controlled artillery forces and airpower to generate offensive power, the British ground forces of XXX Corps proved entirely incapable – in spite of their best efforts – to advance with the alacrity that was required to reach the 1<sup>st</sup> Airborne bridgehead and jump the Rhine in a timely fashion. In light of their training and experience, the standard reaction of the British force to even a modest degree of resistance was to stop and call down the full weight of their firepower upon the defenders, an action that often succeeded in clearing the Germans out, but only after a time consuming deployment and execution of a fire plan. With hours being taken to eliminate virtually every German roadblock, it is hardly surprising that the Germans proved able to gather in reinforcements to continuously renew their lines ahead of the Allied advance; by the time one position was successfully overwhelmed and the British advance resumed, another German force had usually moved in behind it, forcing the entire process to be repeated again and

again. Though this doctrine was certainly capable of maintaining a steady, implacable forward pressure, it could not achieve the rapid breakthrough and exploitation in depth that Market Garden required.

Furthermore, Market Garden was characterized by the inability of the Allied forces to effectively deploy or employ the overwhelming advantage in artillery and aerial firepower that was perhaps their greatest advantage over their German foes. With their spearhead assault force, the 1<sup>st</sup> Airborne Division, severely lacking in both artillery and infantry firepower, and with the potentially decisive equalizer of the powerful Allied tactical air forces all but negated due to a combination of both circumstance and poor planning, the British simply found themselves unable to win the critical firefights at the decisive point of the battle. With the immense artillery resources of the Allied ground armies too far away (for the most part) to provide much more than a nominal (if still valuable and much appreciated) level of support to the isolated and trapped 1<sup>st</sup> Airborne, they were all too quickly overwhelmed by the better armed German infantry forces.

Overall, Market Garden offered the German Army perhaps its last opportunity to win a truly “German” victory; to employ the skills of leadership, flexibility, and proficiency in rapid tactical maneuver that it had developed so diligently in the long years (and decades, and centuries) prior to the Second World War to achieve more than a local, purely tactical success. Such opportunities were few and far between by 1944; with both the Western Allies and the forces of the Soviet Union conducting offensives that wielded their immense superiority in both manpower and material to considerable effect, the Germans were left with few opportunities for the sort of fighting at which they excelled, in which human factors such as leadership, boldness, and quick thinking under pressure mattered more than raw firepower or mass. As long as the Allies stuck to the methods that had proven so successful for them in the recent past, the Germans were unable to muster an effective response. When Field Marshal Montgomery departed from this methodology (which he himself had honed to a very high level of efficiency and effectiveness through the fighting in Normandy), seeking to take advantage of an ephemeral – but naturally very compelling – opportunity to end the war with a single blow, he exposed his forces to defeat by a “classic” German counteroffensive. Montgomery, of all people, should have had

more respect for German fighting capabilities. Though Montgomery's "Colossal Cracks" had won a convincing victory in Normandy, and would eventually see the Allies through to final victory in 1945, in the prevailing circumstances of the fighting that took place in Holland in September 1944, it was German combat doctrine that proved the superior.

It is critical to note, however, that this last German victory, however impressive it may have been in the details of its conduct, was an almost entirely Pyrrhic one. At the conclusion of the battle, Field Marshal Model reported that his forces had suffered approximately 3,300 casualties in defeating the Allied drive through Holland, with about of third of these losses being fatal.<sup>447</sup> However, historian Robert Kershaw, analyzing the extremely fragmentary German casualty record, as well as a variety of testimonial evidence, in considerable detail, has concluded that Model grossly understated Army Group B's losses. From these studies, Kershaw has estimated that Army Group B likely lost between 2,500 and 5,000 men in the Arnhem/Oosterbeek alone, with a total loss of between 6,300 and 9,000 for the entire operation – two to three times Model's figures.<sup>448</sup> These were losses that the German forces, having already suffered through the catastrophic twin blows of Operation Overlord in the west and Operation Bagration in the east that summer, could ill afford; even a two to three to one loss rate against the Allied forces' numerical superiority was unlikely to achieve victory in the long run. Moreover, these losses were made all the worse given that Germany was now effectively "grinding its seed corn," throwing half-trained recruits and half-recovered convalescents straight into battle in a desperate effort to stabilize the tactical/operational situation, even when their combat effectiveness in the long run would have been far greater had they been allowed the time to complete their training or recovery. With even training units and instructors being mobilized, Germany was increasingly choosing to mortgage its strategic future in the interest of immediate operational demands.

Such short-sighted focus on battlefield success over long-term planning was arguably at least as much a defining characteristic of German doctrine and military thought and culture as was

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<sup>447</sup> BA/MA RH 19 IX/10 *Tagesmeldung 26.9 vom Heeresgruppe B, IA an OB West*, 26<sup>th</sup> September 1944, p.1.

<sup>448</sup> Kershaw, *"It Never Snows in September,"* pp. 311, 340.

Bewegungskrieg or Auftragstaktik. The First World War had been lost largely through the inability of German leaders such as von Schlieffen, von Falkenhayn, or Ludendorff to look beyond simply winning the next battle to actually formulating a practical long-term strategic plan to achieve Germany's specific political goals; in focusing upon details, they entirely lost sight of the larger picture. The Second World War, of course, proceeded and concluded in a largely similar fashion, with the Germans able to win many impressive battlefield victories, but utterly incapable of either keeping up such a level of success, or linking the successes they did achieve together into a meaningful and lasting strategic victory.

Thus, the successful German defence against Operation Market Garden serves as an example not only of the continuing tactical and operational proficiency of the German army, and its ability to win battles against the odds, but also of that Army's wider and much discussed strategic failings, which ensured that it was entirely unable to convert its battlefield victories into a lasting and meaningful advantage over its opponents. The German Army's single-minded focus upon achieving battlefield victory ensured a significant neglect of other, equally important, aspects of waging war, which enabled its less tactically proficient enemies to win out in the end, despite numerous defeats on the scale of Arnhem or worse. In this sense, the Battle of Arnhem was indeed, a very "German" victory.

## Bibliography

### Primary Sources

#### Archival Primary Sources

#### UK National Archives Files

CAB 106/1014 *A Short History of 30 Corps in the European Campaign 1944-1945*

CAB 106/1054 *The Battle of Arnhem*

CAB 106/1056 *A Graphic History of the 82<sup>nd</sup> Airborne Division – Operation “Market” Holland 1944*

CAB 106/1078 *The South Staffordshires in the Battle of Arnhem*

WO 171/341 *30 Corps Battle Logs - September 1944*

WO 171/366 *War Diary of British Airborne Corps (Main) – September 1944*

WO 171/376 *War Diary – HQ Guards Armoured Division – January 1944 to September 1944*

WO 171/393 *War Diary - HQ 1<sup>st</sup> Airborne Division September to December 1944*

WO 171/406 *Original War Diary of 1<sup>st</sup> Airborne Recce Squadron RAC for 1<sup>st</sup> Sept '44 to 30<sup>th</sup> Sept '44*

WO 171/480 *War Diary – HQ 43<sup>rd</sup> Division – August – September 1944*

WO 171/592 *War Diary - HQ 1<sup>st</sup> Parachute Brigade - January 1944 to December 1944*

WO 171/594 *War Diary - Headquarters 4<sup>th</sup> Parachute Brigade – January to September 1944*

WO 171/605 *War Diary - HQ 5<sup>th</sup> Guards Armoured Brigade – January to December 1944*

WO 171/638 *War Diary - HQ 32<sup>nd</sup> Guards Brigade – Year 1944 – January to December*

WO 171/658 *War Diary – HQ 129<sup>th</sup> Infantry Brigade, 21<sup>st</sup> Army Group 1944*

WO 171/660 *War Diary – HQ 130<sup>th</sup> Infantry Brigade 1944 – January to December 1944*

WO 171/1016 *War Diary - HQ 1<sup>st</sup> Air Landing Light Regiment, R.A., 21<sup>st</sup> Army Group 1944*

WO 171/1016 *War Diary – HQ 1<sup>st</sup> Air Landing Light Regiment, 21<sup>st</sup> Army Group – August to December 1944*

WO 171/1236 *War Diary – 1<sup>st</sup> Battalion Parachute Regiment - January to December 1944*

WO 171/1237 *War Diary – 2<sup>nd</sup> Battalion Parachute Regiment - January to December 1944*

WO 171/1238 *War Diary – 3<sup>rd</sup> Battalion Parachute Regiment – January to December 1944*

WO 171/1243 *War Diary – 10<sup>th</sup> Battalion Parachute Regiment – January to December 1944*

WO 171/1244 *War Diary – 11<sup>th</sup> Battalion Parachute Regiment – January to December 1944*

WO 171/1247 *War Diary – 156<sup>th</sup> Battalion Parachute Regiment – March to October 1944*

WO 171/1248 *War Diary – 21<sup>st</sup> Independent Parachute Company – January to December 1944*

WO 171/1250 *War Diary – 1<sup>st</sup> Armoured Battalion Coldstream Guards – January to December 1944*

WO 171/1252 *War Diary – 5<sup>th</sup> Battalion Coldstream Guards – January to December 1944*

WO 171/1253 *War Diary – 1<sup>st</sup> Battalion Grenadier Guards – January to December 1944*

WO 171/1254 *War Diary – 2<sup>nd</sup> Battalion Grenadier Guards – January to December 1944*

WO 171/1256 *War Diary – 2<sup>nd</sup> Armoured Battalion Irish Guards, 21<sup>st</sup> Army Group – January to December 1944*

WO 171/1257 *War Diary – 3<sup>rd</sup> Battalion Irish Guards – January to December 1944*

WO 171/1259 *War Diary – 1<sup>st</sup> Battalion Welsh Guards – January to December 1944*

WO 171/1260 *War Diary – 2<sup>nd</sup> (Recce) Battalion Welsh Guards – June to December 1944*

WO 171/1323 *War Diary – 7<sup>th</sup> Battalion Kings' Own Scottish Borderers – January to December 1944*

WO 171/1375 *Original War Diary – 2<sup>nd</sup> Battalion South Staffords – September 1944*

WO 171/589 *War Diary – H.Q. 1<sup>st</sup> Air Landing Brigade (Airborne Element) – January to December 1944*

WO 205/871 *Report of Airborne Phase (17-27 Sept., 44) Operation "Market"- XVIII Corps*

WO 205/873 *Allied Airborne Operations in Holland – September to October 1944*

WO 205/623 *Operational Reports Market Garden – October 1944 to January 1945*

WO 205/693 *Operation Market Garden: Reports and Instructions – September 1944 to February 1945*

WO 205/1124 *Battle of Arnhem: SS Panzer Grenadier Depot & Reserve Battalion 16 – German War Diary*

WO 205/1126 *21 Army Group – Operation "Market Garden" 17-26 September 1944*

Bundesarchiv/Militärarchiv Files

- RH 19 IV/56 – Heeresgruppe D/ Oberbefehlshaber West/ Oberbefehlshaber Süd/ Kriegstagebücher und Anlagen/ Bemerkung zur Serie/ Anlagen Nr. 1-2505/ Band 10: 11. Sept. – 20. Sept. 1944.
- RH 19 IX/5 – Heeresgruppe B/Führungsabteilung/Abteilung Ia/Operationsbefehle 1944/Bande 2: 1. Sept-30. Sept. 1944
- RH 19 IX/8 - Heeresgruppe B/Abteilung Ia/Lagebeurteilungen der Heeresgruppe B, 11. Juni – 11. Okt. 1944
- RH 19 IX/10 – Heeresgruppe B/Abteilung Ia/Tagesmeldungen der Heeresgruppe B 1944/Bande 2: 1. Sept. – 15. Okt. 1944.
- RH 24 88/123 – LXXXVIII. Armeekorps/Abteilung Ib (Quartiermeisterabteilung)/Anlagen zum Kriegstagebuch/Bande 1: 1. Juli -25. Sept. 1944.
- RH 24 88/124 – LXXXVIII. Armeekorps/Abteilung Ib (Quartiermeisterabteilung)/Anlagen zum Kriegstagebuch/Bande 2: 25. Sept – 2. Nov. 1944.
- RH 24/203/3 – Generalkommando Feldt/Briefstagebuch zum Kriegstagebuch 9. Aug. – 14. Dez. 1944.
- RS 2-2/32 – II. SS-Panzerkorps/sonstige Unterlagen/Bericht über die Kämpfe im Gebiet Arnheim, 10. Sept – 15. Okt. 1944.
- RS 3-9/45 – 9. SS Panzer-Division Hohenstaufen/Abteilung Ia (Führungsabteilung)/Tagesmeldungen, Befehle (Fernschreiben und Funksprüche) 1944/Bande 2: 9. Sept. – 8. Dez. 1944.
- RS 3-10/4 – 10. SS-Panzer-Division Frundsberg/Abteilung Ia/Unterlagen der Abt. Ia, Ib, IC, II,Iva,V und VI –Allgemeines/Juli 1943 – Sept. 1944.

Published Primary Sources

- Blauensteiner, Ernst. *Employment of the II Fallschirm Korps Between the Maas and Rhine Rivers, 19 September 1944 to 10 March 1945*. MS # B-262. Allendorf: US Army Historical Division, Foreign Military Studies Collection, 1946.
- Brereton, Lewis H. *The Brereton Diaries: The War in the Air in the Pacific, Middle East and Europe, 3 October 1941 - 8 May 1945*. New York: Da Capo Press, 1976.
- British General Staff. *Field Service Regulations, Vol. II. Operations - General (1935)*. London: His Majesty's Stationery Office, 1935.
- \_\_\_\_\_. *Field Service Regulations, Vol. III. Operations – Higher Formations (1935)*. London: His Majesty's Stationery Office, 1935.
- Burgett, Donald R. *The Road to Arnhem: A Screaming Eagle in Holland*. Novato, CA: Presidio Press, 1999.
- Condell, Bruce and David T. Zabecki, (eds.) *On the German Art of War: Truppenführung: German Army Manual for Unit Command in World War II*. Mechanicsburg, PA: Stackpole Books, 2009.

- von Clausewitz, Carl. *On War*. New York: Penguin Books, 1968.
- Eisenhower, Dwight D. *Crusade in Europe*. Garden City, NY: Garden City Books, 1952.
- Faeckenstadt, Ernst F. *The Activities of the Western Wehrkreis/commandos (military area headquarters) VI and XII and their cooperation with the front in the defensive combat of OB West from September 1944 to March 1945*. MS # B-665. Allendorf: US Army Historical Division, Foreign Military Studies Collection, 1947.
- Gavin, James M. *On to Berlin: Battles of an Airborne Commander, 1943-1946*. New York: The Viking Press, 1978.
- Frost, John. *A Drop too Many*. London: Cassell, 1980.
- von der Heydte, Friedrich August. *6<sup>th</sup> Fallschirm Jaeger Regiment in Action against US Paratroopers in the Netherlands in September 1944*. MS # C-001. US Army Historical Division, Foreign Military Studies Collection.
- Horrocks, Sir Brian. *A Full Life*. London: Collins, 1960.
- Field-Marshal The Viscount Montgomery of Alamein. *El Alamein to the River Sangro/ Normandy to the Baltic*. New York: St. Martin's Press, 1948.
- Mattenklott, Franz. *Rhineland, Part 3: 15 Sept 44-21 March 45*. MS # B-044. Königstein: US Army Historical Division, Foreign Military Studies Collection, 1950.
- Meidl, Eugen. *II FS Corps, Part III: Rheinland (15 Sep 44 to 21 Mar 45)*. MS # B-093. .Königstein: US Army Historical Division, Foreign Military Studies Collection, 1950.
- Poppe, Walter. *2<sup>nd</sup> Commitment of the 59<sup>th</sup> Infantry Division in Holland; 18 September – 25 November 44*. MS # B-149. Allendorf: US Army Historical Division, Foreign Military Studies Collection, 1946.
- Reinhardt, Hellmuth. *Commitment of the 406<sup>th</sup> Division against the Allied Air Landing at Nijmegen in September 1944*. MS # C-085. Königstein: US Army Historical Division, Foreign Military Studies Collection, 1950.
- Sims, James. *Arnhem Spearhead: A Private Soldier's Story*. London: Sphere Books, 1980.
- Taylor, Maxwell. *Swords and Plowshares*. New York: W.W Norton & Company, 1972.
- Urquhart, R.E. *Arnhem*. London: Cassell, 1958.
- Von Zangen, Gustav Adolf. *Battles of the Fifteenth Army Between the Meuse-Scheldt Canal and the Lower Meuse*. MS # B-475. Allendorf: US Army Historical Division, Foreign Military Studies Collection, 1947.

## Secondary Sources

- Buckley, John and Peter Preston-Hough (eds.) *Operation Market Garden - The Campaign for the Low Countries, Autumn 1944: Seventy Years On*. Wolverhampton Military Studies No. 20. Solihull, UK: Helion & Company Limited, 2016.
- Bull, Stephen. *World War II Infantry Tactics: Company and Battalion*. Elite Series 122. Oxford: Osprey Publishing, 2005.
- \_\_\_\_\_. *World War II Infantry Tactics: Squad and Platoon*. Elite Series 105. Oxford: Osprey Publishing, 2004.
- Cirillo, Roger. "Market Garden and the Strategy of the Northwest Europe Campaign". in *Operation Market Garden : The Campaign for the Low Countries, Autumn 1944: Seventy Years On*. Eds.. John Buckley and Peter Preston-Hough. Solihull: Helion & Company, 2016.
- Citino, Robert M. *The German Way of War: From the Thirty Years' War to the Third Reich*. Lawrence, KS: University of Kansas Press, 2005.
- \_\_\_\_\_. *The Path to Blitzkrieg: Doctrine and Training in the German Army, 1920-1939*. Boulder, CO: Lynne Rienner Publishers, 1999.
- Copp, Terry. "Counter-Mortar Operational Research in the 21 Army Group." *Canadian Military History* 3, No. 2 (1994): 45-52.
- Corum, James S. *The Roots of Blitzkrieg: Hans von Seeckt and German Military Reform*. Lawrence, KS: University Press of Kansas, 1992.
- Crang, Jeremy A. *The British Army and the People's War 1939-1945*. Manchester: Manchester University Press, 2000.
- Davies, W.J.K. *German Army Handbook 1939-1945*. New York: Arco Publishing, 1977.
- Dupuy, Trevor N. *The Evolution of Weapons and Warfare*. New York: Bobbs-Merrill, 1980.
- \_\_\_\_\_. *Understanding War: History and Theory of Combat*. New York: Paragon House, 1987.
- Echeverria, Antulio A. "Auftragstaktik in its Proper Perspective." *Military Review* 66, No. 10 (1986): 50-56.
- Ethell, Jeffrey and Dr. Alfred Price. *Target Berlin: Mission 250, 6 March 1944*. London: Greenhill Books, 1981.
- Förster, Jürgen. "The Dynamics of Volksgemeinschaft: The Effectiveness of the German Military Establishment in the Second World War." in *Military Effectiveness, Volume 3: The Second World War*. New Edition. Eds.. Allan R. Millet and Williamson Murray. New York: Cambridge University Press, 2010.
- French, David. "Doctrine and Organization in the British Army, 1919-1932," *The Historical Journal* 44, No. 2 (2001): 497-515.

- \_\_\_\_\_. *Raising Churchill's Army: The British Army and the War Against Germany 1919-1945*. Oxford: Oxford University Press, 2000.
- Fritz, Stephen G. *Frontsoldaten: The German Soldier in World War II*. Lexington: University Press of Kentucky, 1995.
- Greenacre, John W. "Assessing the Reasons for Failure: 1<sup>st</sup> British Airborne Division Signal Communications during Operation "Market Garden,"" *Defence Studies* 4, No. 3 (2004): 283-308.
- Harclerode, Peter. *Arnhem: A Tragedy of Errors*. London: Arms and Armour Press, 1994.
- \_\_\_\_\_. *Wings of War: Airborne Warfare 1918-1945*. London: Cassell, 2005.
- Hart, Russell A. "Mission Impossible? The Mobilization of the German Replacement Army and its Role In the Thwarting of Operation Market Garden." in *Operation Market Garden : The Campaign for the Low Countries, Autumn 1944: Seventy Years On*. Eds.. John Buckley and Peter Preston-Hough. Solihull: Helion & Company, 2016.
- Hart, Stephen Ashley. *Montgomery and "Colossal Cracks": The 21<sup>st</sup> Army Group in Northwest Europe, 1944-45*. Westport, CT: Praeger Publishers, 2000.
- Harvey, A.D. *Arnhem*. London: Cassell & Co, 2001.
- Haythornthwaite, Philip. *Frederick the Great's Army (2) Infantry Men at Arms Series 205*. Oxford: Osprey Publishing, 1991.
- Hogg, Ian V. *British & American Artillery of World War Two*. London: Greenhill Books, 2002.
- \_\_\_\_\_. *German Artillery of World War Two*. London: Greenhill Books, 2002.
- Kershaw, Robert J. *"It Never Snows in September" The German View of MARKET-GARDEN and The Battle of Arnhem, September 1944*. Hersham, UK: Ian Allan Publishing Ltd, 2004.
- Kjoerstad, Ola. "German Officer Education in the Interwar Years: Frei im Geist, fest im Charakter." MA Thesis, University of Glasgow, Scotland, 2010.
- LoFaro, Guy. *The Sword of St. Michael: The 82<sup>nd</sup> Airborne Division in World War II*. Philadelphia, PA: De Capo Press, 2011.
- Middlebrook, Martin. *Arnhem 1944: The Airborne Battle, 17-26 September*. Barnsley, UK: Pen & Sword Military, 1994.
- Mitcham, Samuel W. Jr. *German Order of Battle Volume One: 1<sup>st</sup>-290<sup>th</sup> Infantry Divisions in WWII*. Mechanicsburg, PA: Stackpole Books, 2007.
- Murray, Williamson. "British Military Effectiveness in the Second World War," in *Military Effectiveness, Volume 3: The Second World War*. New Edition. Eds.. Allan R. Millet and Williamson Murray. New York: Cambridge University, 2010.

- Murray, Williamson. *German Military Effectiveness*. Baltimore: The Nautical & Aviation Publishing Company of America, 1992.
- Myatt, Frederick. *The British Infantry 1660-1945*. Poole: Blandford Press, 1983.
- Norris, John. *Infantry Mortars of World War II*. New Vanguard 54. Oxford: Osprey Publishing, 2002.
- Peaty, John. "Operation MARKET GARDEN: The Manpower Factor," in *Operation Market Garden: The Campaign for the Low Countries, Autumn 1944: Seventy Years On*. Eds.. John Buckley and Peter Preston-Hough. Solihull: Helion & Company, 2016.
- Place, Timothy Harrison. *Military Training in the British Army 1940-1944: From Dunkirk To D-Day*. London: Frank Cass, 2000.
- Powell, Geoffrey. *The Devil's Birthday: The Bridges to Arnhem, 1944*. London: Buchan & Enright, 1984.
- Ryan, Cornelius. *A Bridge Too Far*. New York: Pocket Books, 1974.
- Reynolds, Michael. *Sons of the Reich: II SS Panzer Corps – Normandy, Arnhem, the Ardennes and on the Eastern Front*. Barnsley, UK: Pen & Sword Military, 2009.
- Ritchie, Sebastian. *Arnhem – Myth and Reality: Airborne Warfare, Air Power and the Failure of Operation Market Garden*. London: Robert Hale Limited, 2011.
- Rottman, Gordon L. *World War II Airborne Warfare Tactics*. Elite Series 136. Oxford: Osprey Publishing, 2006.
- \_\_\_\_\_. *World War II Glider Assault Tactics*. Elite Series 200. Oxford: Osprey Publishing, 2014.
- Samuels, Martin. *Command or Control? Command, Training and Tactics in the British and German Armies, 1888-1918*. London: Frank Cass, 1995.
- Slaughter, Jamie. "Allied Close Air Support during Operation Market Garden: A Lesson in Planning," in *Operation Market Garden: The Campaign for the Low Countries, Autumn 1944: Seventy Years On*. Eds.. John Buckley and Peter Preston-Hough. Solihull: Helion & Company, 2016.
- Strohn, Matthias. *The German Army and the Defence of the Reich: Military Doctrine and the Conduct of The Defensive Battle 1918-1939*. Cambridge: Cambridge University Press, 2011.
- Tieke, Wilhelm. (Translated by Frederick Steinhardt). *In the Firestorm of the Last Years of the War: II. SS-Panzerkorps with the 9. and 10. SS-Divisions "Hohenstaufen" and "Frundsberg."*
- Tugwell, Maurice. *Arnhem: A Case Study*. London: Thornton Cox, 1975.
- Zaloga, Steven J. *Operation Pointblank: Defeating the Luftwaffe*. Campaign 236. Oxford: Osprey Publishing, 2011.
- Zetterling, Niklas. *Normandy 1944: German Military Organization, Combat Power and Organizational Effectiveness*. Winnipeg, MN: J.J. Fedorowicz, 2000.