

Battle of Vellinghausen: Lessons Learnt?

A Study of the British army in the closing stages of the Seven Years War in Western Europe as studied through the Battle of Vellinghausen

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The candidate confirms that the work submitted is his own and that appropriate credit has been given where reference has been made to the work of others

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Abstract

This is a study of the British military actions in Western Germany during the Seven Years War, investigating the army's ability in combat and analysing its improvements through the case study of the Battle of Vellinghausen. This will provide a more concentrated scope of the conflict centred on the Western theatre, rather than the general study upon the British army in America or the academic's attraction with the Battle of Minden. With this in mind the research will be significant as it will open up discussions on how the British army fought in the European style during the mid-eighteenth century, as well as aiming to explore whether the British army learnt from its lessons early in the war to become an efficient fighting machine.

The purpose of this thesis is to identify the actions of the British army during the Seven Years War in Western Germany, breaking the army down into its component parts to highlight how the army fought on a European battlefield. By addressing the campaigns during 1758-61, this gives me several key battles with which to analyse whether the army improved its performance. The mid-eighteenth century was a period of shifting tactics in the way European war was fought, with new tactics and doctrine altering warfare, such as the adoption of irregular forces, or the advancement in artillery science. This thesis will identify any changes that were absorbed and whether these improved the army.

It is to be noted that Western Europe is important to study, as the historiography studied within the Seven Years War focuses on other theatres of the conflict, chiefly America and Frederick the Great's campaigns in Central Europe. This lack of interest by British historians could possibly be due to the fact that the army in Western Europe was not chiefly a British one; nor was the theatre considered particularly important by the British government or featured any monumental battles such as Leuthen, Kolin or Kunersdorf. These features could be contributing to the lack of academic study within this area, a situation I would like to address. Coupled with this is the fact that enough has already been written on the analyses of the political, social and economic areas of this period in the Age of Enlightenment. Thus I believe it is necessary to return to traditional military history, which has long been neglected, and bring to light the successful actions of the British Army in Western Europe back into study.

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Introduction

The aim of this thesis is to study the British army in Western Germany during the Seven Years War. By analysing the battles fought by the army during the campaigns of 1758–1761, I can investigate how the army conducted itself on the battlefield. Furthermore, using this timescale, with the battle of Vellinghausen in July 1761 as an end point, it will allow me to deduce whether there was any improvement within the army of its ability in combat. This will bring wider attention to the Western German theatre of war, and will also expand our knowledge of British military history and the army's capabilities during this period.

The thesis will be broken down into five chapters, with four looking at the composite sections of the army. The first section will investigate the line infantry, identifying how the foot infantry regiments were trained to fight as documented in the British regulations. We will then observe any changes that may have affected this style through the introduction of other works of literature, and ultimately report how the line infantry fought in Western Germany as compared to the regulations and literature. The second chapter on the cavalry will generally follow the format of the first, relating the regulations which documented how the cavalry fought and then observing any outside influences which may have affected this style; then describing how the cavalry actually fought, especially during the famous cavalry victory at Warburg, 31 July 1760. One concurrent theme we witness in these two chapters is changes in the army due to Prussian influences. Though Britain was an island, it was still affected by the changes that were sweeping through the European armies on the continent, and many of these innovations were either adopted or countered. This idea is explored in the third chapter, where a discussion of the development of British light infantry will be undertaken. As

there were no regular light troops in the British army at the advent of the Seven Years War, there were no regulations on this topic. Therefore, this chapter will observe the transformations that were happening in Europe, most notably with the adoption of light infantry formations to the Austrian and French armies, and determine how far the British army absorbed these changes or developed ways to counter them. As the light infantry was an area of the British army that went through a great deal of synthesis during the Seven Years War, we will analyse how the British army evolved light infantry units of its own, and how they were utilised in Western Germany. The final chapter will delve more deeply into the intellectual areas of warfare, specifically identifying how research into the ballistics revolution advanced the science of artillery warfare. This was tied together with the establishment of the Royal Military Academy at Woolwich, which provided cadets with substantial knowledge and training in the expanding science of artillery combat. The chapter will continue to observe the actions of the artillery in Western Germany, and determine how these intellectual advances enabled the artillery to be a significant force on the battlefield compared to previous wars the British army had fought in. The final chapter will be utilised as a case study. By identifying the events of the Battle of Vellinghausen, 15/16 July 1761, I can use them to observe what improvements were developed in the army. The battle of Vellinghausen is a crucial battle to study as it was one of the last major battles in Western Germany, and as such gives us a good understanding of what level of experience the army had reached after it had spent three years in this theatre. The improvements can be categorised into three sections: the skill development that comes with experiencing many campaigns, the development of new arms technology, and the establishment of new tactics and units that evolved the way the army fought. By utilising this approach I can better highlight any improvements that were developed throughout the war.

It was the books by Fortescue and Savory that provided me with the initial knowledge of events which piqued my interest in this period.¹ My need to understand more about the understudied campaigns in Western Germany as opposed to those in America, or in Central Europe led me to develop this thesis. Though the aforementioned works provided a chronological description of the events of the war, I determined on a thematic approach so that I could investigate the aspects of the British army more closely. A greater amount of attention by historians studying the Seven Years war has been given to the areas of America and Central Europe, especially as several of the notable battles of the war were fought in these areas, such as the siege of Quebec, or the battle of Leuthen.² Furthermore, as the general literature has a strong interest in the big figures of history in the other regions, such as James Wolfe or Frederick the Great, this has stunted research into Western Germany.³ Despite this, the characters who fought in Western Germany, who have attracted less research, were no less instrumental on the outcome of the war. This lack of study may have also stemmed from the nature of the Western German theatre of operations, as this region was considered secondary to the more important British war aims of protecting and expanding its overseas colonies, especially in America. Moreover, only a small proportion of the British army was sent to Germany, with the Allied army being composed mostly of forces from the many German states allied to Britain and Prussia. Plus the Allied army was commanded by a German, Prince Ferdinand of Brunswick. This lack of a British focus may be the reason for the limited study of the British army in Western Germany, but it does not mean to

¹ J.W. Fortescue, *A History of the British Army*, vol. 2 (London: Macmillan and Co., 1899); Sir Reginald Savory, *His Britannic Majesty's Army in Germany During the Seven Years War* (Oxford: Clarendon Press, 1966).

² Examples include: Steven Brumwell, *Redcoat: The British Soldier and War in the Americas, 1755–1763* (Cambridge: Cambridge University Press 2002); Fred Anderson, *Crucible of War; The Seven Years' War and the Fate of Empire in British North America, 1754–1766* (London: Faber and Faber, 2001); Franz A.J. Szabo, *The Seven Years War in Europe, 1756–1763* (Harlow: Pearson Longman, 2008).

³ Stuart Reid, *Wolfe: The Career of General James Wolfe from Culloden to Quebec* (Staplehurst: Spellmount, 2000); Tim Blanning, *Frederick the Great* (London: Allen Lane, 2015).

say that the army was any less influential in this area. While the limited study on Western Germany has yielded some useful research into areas such as the logistics of the army, its welfare or its training, the combat factors have not been discussed.⁴ This is why this thesis is needed to fill in the gap in research by providing knowledge on the actions on the battlefield. For any future analysis of the Seven Years War, all sections of the war needed to be covered to provide a holistic study, something this thesis hopes to achieve.

Despite the lack of discussion around this area in English language publications, there is a great depth of archival material from which to build an understanding of the actions of the British army. The State Papers at the National Archives in Kew are extensive and provide glimpses into the combat actions of the army, especially through the medium of general's reports from the battlefield. Furthermore, after delving into the numerous archives at the British Library in London, several additional manuscripts have yielded a great deal of information detailing the events of the battles. A very important journal of the war found at this repository (anonymously attributed, but most likely written by Captain Fitzroy, aide de camp to Prince Ferdinand), provides great in-depth clarity of the many battles fought in the period of 1760-62.⁵ These sources have not been utilised in other works of literature, and give us other sources from which to cross reference the general chronological histories of the period.

Though this study aims to describe the combat actions of the British army in the main battles of the war, the length constraints of this thesis leaves certain areas open for further questioning. Subjects such as the training of the army while on campaign, the logistics, and social-cultural factors, all of which may have affected the combat ability

⁴ H.M. Little, 'The Emergence of a Commissariat during the Seven Years War in Germany', *Journal of the Society for Army Historical Research*, vol.61 no. 248 (1983) 201–214; Erica Charters, *Disease, War, and the Imperial State* (Chicago: Chicago University Press, 2014); J.A. Houlding, *Fit for Service: The Training of the British Army, 1715–1795* (Oxford: Clarendon Press, 1981)

⁵ London, British Library, ADD MSS 28551; London, British Library, ADD MS 28552.

of the army can not be sufficiently covered and so I will leave these topics for later research.⁶

Ultimately this thesis will aim to cover the combat factors of the British army in Western Germany during the Seven Years War, investigating its several component parts and utilising the Battle of Vellinghausen as a case study to investigate whether there was any improvement within the British army during the period 1758–1761.

⁶ For the training of the British army in the period see: J.A. Houlding, *Fit for Service: The Training of the British Army, 1715–1795* (Oxford: Clarendon Press, 1981), however, he does not go into great detail on the training of the army during the Seven Years War in Western Germany.

Line Infantry

The term Redcoat conjures a powerful image in the national consciousness of what embodied Britain during the eighteenth century; the all-conquering soldier who trekked miles over European battlefields and defeated numerous enemies of the country. The reality however is very different, providing a much grittier experience for any soldier who found himself in one of the many line infantry regiments. This chapter will investigate the way the line infantry was organised to fight as described in the regulations set down in the 1750's, compared with how the line infantry actually fought in Western Germany during the Seven Years War.⁷ Accounts from officers in the battles, such as Major Estorff and Captain Wilson, would lay witness to not only the success of the British infantry, but also the extreme hardships they had to suffer to gain the victory.⁸ Through investigating literature and the influence of certain officers, I will detail how the line infantry shifted their doctrine with respect to the platoon/alternate fire systems and how this enabled success on the Western German battlefields. The early successes of the British infantry in the first half of the eighteenth century, especially during the War of the Spanish Succession, solidified the British army's belief in winning battles through maximising firepower. The improvements in firearms technology led to changes in battlefield tactics, as infantry regiments decreased their ranks to only three to take advantage of the flintlock's improved fire rate, whilst the adoption of complex platoon firing systems enabled a process of continuous fire. The British system of platoon fire utilised by the army upon the assumption of the Seven Years War was influenced by the works of Humphrey Bland and Richard Kane, which

⁷ See: Anon, *A system of camp discipline, military honours, garrison duty, and other regulations for the land forces etc* (London: J. Millan, 1757), Anon, *New Manual Exercise as performed by His Majesty's Dragoons, Foot-Guards, Foot, Artillery, Marines, and by the Militia* (London: J. Millan, 1758).

⁸ London, British Library, Add MS 49606; London, British Library, Add MS 32894.

became a major focus of the 1750's regulations.⁹ Meanwhile, in France, intellectuals such as Jean-Charles de Folard, François-Jean de Mesnil-Durand, and Maurice de Saxe began to write on the efficacy of speed and shock, through the use of columns instead of lines.¹⁰ This approach in overcoming the limitations of linear warfare was not adopted in Britain, as many believed that this system had given the British army success, while the French defeats in the wars of the early eighteenth century may have driven their intellectuals to search for new tactics.¹¹

By the advent of the Seven Years War, linear battle tactics had become the *modus operandi* in the eighteenth-century art of war. The tactics of British infantry warfare at the battalion level during the mid-eighteenth century were focused on bringing the battalion opposite the enemy and defeating them through the battalion's firepower. The regulations state:

In this Order the Battalion advances (in its Brigade) on the Enemy, the Officers taking care to preserve Silence among the Men; and when the General commanding the Brigade, or the Colonel, gives Orders to fire, the Officers to fire their Platoons as quick as possible, taking care that the Men level well, and present and fire together.¹²

With the introduction of the flintlock musket, as well as the iron ramrod in the early part of the century, greater rates of fire could be achieved than previously.¹³ With the weaknesses of the reload time limited, armies took advantage of this by decreasing their infantry regiments ranks to three. With the cavalry limited by the topography of battlefields, linear warfare would usually witness a murderous firefight determined by

⁹ Humphrey Bland, *A Treatise of Military Discipline* (London: Printed for John and Paul Knapton, 1753) as well as Richard Kane, *Campaigns of King William and Queen Anne; from 1689 to 1712. Also, a new system of military discipline, for a Battalion of Foot on action* (London: J. Millan, 1745).

¹⁰ See Jean-Charles de Folard, *Histoire de Polybe... Avec un Commentaire ou un Corps de Science Militaire* (Amsterdam: Chatelain et Fils, 1753), F.J. Mesnil-Durand, *Projet d'un ordre françois en tactique* (Paris: Antoine Boudet, 1755) and Maurice Count de Saxe, *Reveries or Memories concerning the Art of War* (Edinburgh: Sands, Donaldson, Murray and Cochran, 1759).

¹¹ Armstrong Starkey, *War in the Age of Enlightenment, 1700–1789* (London: Praeger, 2003) pp.52–53.

¹² Anon, *A system of camp discipline, military honours, garrison duty*, p.57.

¹³ H.C.B Rogers, *The British Army of the Eighteenth Century* (London: Allen and Unwin, 1977) p.67.

the skill and bravery of the infantry.¹⁴ Platoon fire systems were subsequently introduced to maintain a constant level of fire, further mitigating the reload time. A system of continuous fire would also provide a sustained psychological shock on the enemy. Rather than firing one large volley which would leave the battalion with no fire in reserve, the platoon fire system would always ensure that part of the regiment was ready. The system utilised by the British army was described by Richard Kane in his work *A new system of military discipline* in 1745, and later copied down in the regulations described in the work *A system of camp discipline, military honours, garrison duty, and other regulations for the land forces etc* in 1757.¹⁵ The system began by dividing the regiment into four grand divisions. Kane describes how ‘Each Division [was] to be divided in four Platoons, which, with the Grenadiers will make up eighteen... The eighteen Platoons are to be divided into three Fireings, so that there will be six in each’.¹⁶ Once battle had been joined and a regiment had marched into firing distance of the enemy, the Colonel of the Regiment would order the first ‘fireing’ to discharge their muskets, followed by the second and third. This would allow each consecutive ‘fireing’ to fire, while the others were reloading, ensuring that always a part of the regiment were firing on the enemy. However this system was complicated and involved the men being split into sections that were not their usual companies. Having to listen for officer’s voices who may not have been familiar to them could cause confusion during the heat of battle. This breakdown of the regiment into the sixteen platoons plus the grenadiers continues to be supported in the later regulation: *New manual exercise as ordered by his Majesty* in 1758.¹⁷ The regulations called for the men

¹⁴ Claus Telp, *The Evolution of Operational Art, 1740–1813: from Frederick the Great to Napoleon* (London: Frank Cass, 2005) p.17.

¹⁵ Richard Kane, pp.109–140; Anon, *A system of camp discipline, military honours, garrison duty*, pp.56–57.

¹⁶ Richard Kane, p.112.

¹⁷ Anon, *New Manual Exercise as performed by His Majesty’s Dragoons, Foot-Guards, Foot, Artillery, Marines, and by the Militia* (London: J. Millan, 1758) p.5.

to ‘preserve their Fire till it will do certain Execution on the Enemy’, ensuring that the men came within suitable range of the enemy first before firing.¹⁸ This highlights the importance the regulations placed on the fire of the first volley. It further stated that the Officers in the platoons:

Must likewise take care to keep their Men shouldered, and prevent their throwing away their first Fire, which as it is well rammed down, will in all probability do greater Execution than any of the succeeding Fires; for the Soldiers are apt, in the Hurry of Action, to neglect ramming down their Cartidges.¹⁹

We observe this at the battle of Fontenoy, 11 May 1745,²⁰ where the British infantry’s first volley shattered the French *Gardes-Francaise*, and indicated the effectiveness of the first volley fired by a regiment.²¹ The regulations focus on the regiment maintaining a fire superiority over their adversaries and to drive them off in this manner alone. It simply states that the platoons are to fire ‘as quick as possible, taking care that the Men level well, and present and fire together’.²² Further instructions were originally added in Richard Kane’s *A new system of military discipline*, only stating that if the Enemy maintained their ground, then the regiment was to march closer to the enemy and then begin firing again until the enemy was driven off.²³ This highlights the importance of firepower in the regulations over attacking with the bayonet. Yet this was usually effective enough, as the French commented on how their own infantry were inferior to the British due to the superiority of its counterpart’s firepower.²⁴

¹⁸ Anon, *A system of camp discipline, military honours, garrison duty*, p.57.

¹⁹ Ibid, p.57.

²⁰ For a relation of the battle of Fontenoy see: Rex Whitworth, *Field Marshal Lord Ligonier, The British Army 1702–1770* (Oxford: Clarendon Press, 1958) pp.96–104.

²¹ John Mancip White, *Marshal of France: the Life and Times of Maurice, Comte de Saxe* (London: Hamish Hamilton) p.159–60.

²² Anon, *A system of camp discipline, military honours, garrison duty*, p.57.

²³ Richard Kane, pp.119–20.

²⁴ J.A. Houlding, *Fit for Service: The Training of the British Army, 1715–1795* (Oxford: Clarendon Press, 1981) p.359.

In 1757 the *New regulations for the Prussian infantry* was introduced to a British audience. It provided a description of the platoon fire system known in Britain as ‘alternate fire’ and added to the burgeoning discussion for this different system to be implemented into the British army. The alternate fire system was much simpler than the platoon system as it relied on the company as the basis for the divisions of fire. Instead of breaking the regiment into 18 platoons, the regiment’s eight companies (known as platoons in the Prussian army) would fire in successive order, rippling their fire from the flanks to the centre.²⁵ This system would be simpler for the men to understand as they would still be under the command of their company officers, and so would understand who to listen out for in the havoc of battle.

The Prussian regulations were supported by the influential work of Campbell Dalrymple: *A Military Essay* in 1760.²⁶ The regiment’s firing system described in this work adhered to the Prussian style: ‘Every company being a platoon, and every two companies a grand division, there is no telling off; but the battalion is formed, and ready for action, the moment that the companies have taken up their ground.’²⁷ However, as opposed to the Prussian system, his has the companies/platoons firing in a domino order, one after the other left to right.²⁸ The alternate fire system had strong support from several officers in the British army, and had begun to be utilised by many regiments as early as 1755. The shift to alternate fire was vehemently objected to by the Duke of Cumberland,²⁹ but his fall from grace after the battle of Hastenbeck allowed the change to be progressively adopted into the British battalions, especially those serving under General Mordaunt.³⁰ During training for the amphibious expedition against the

²⁵ Anon, *New regulations for the Prussian infantry* (London: J Rivington, 1757) p.34.

²⁶ Campbell Dalrymple, *A Military Essay, Containing reflections on the raising, arming, cloathing, and discipline of the British infantry and cavalry* (London: D. Wilson, 1761).

²⁷ Ibid, pp.88–89.

²⁸ Ibid, p.76.

²⁹ Prince William Augustus, Duke of Cumberland (1721–1765).

³⁰ General Sir John Mordaunt (1697–1780).

coasts of France in 1757, both he and his regimental officers, Lieutenant-Colonel James Wolfe and the Duke of Richmond,³¹ instituted this change into their infantry.³² Three of these regiments would be part of the first detachment of British troops in Western Germany.³³

The Prussian regulations also highlight the importance of attacking with the bayonet if the enemy did not retreat during the firefight.³⁴ Campbell Dalrymple supports this and gives instructions for the infantry on how to attack in this style:

The commanding officer may now repeat the word *march*, which will quicken the pace; and soon after give the word, *charge with bayonet*; when the men, at one motion, must bring the firelock down, so as to have it firm in hand, with the point of the bayonet breast-high... At the word *charge*, the whole rush forward, keeping ranks and files close, and well dressed, which practice will render easy [...] *if the enemy* should not wait the charge, *beat a ruff to halt*, and *preparative* to make ready.³⁵

This willingness to attack with the bayonet is not featured in the earlier regulations and is more akin to the French literature which suggests the preference of cold steel over firepower. This should not be a surprise as Campbell Dalrymple's work was influenced by the theories of Maurice de Saxe in his work *Reveries or Memories concerning the Art of War*.³⁶

The British infantry in Western Germany during the Seven Years War fought more akin to these later publications rather than the regulations. The Prussian influence is significant as it affected many facets of the infantries fighting style, such as the change to the alternate fire system, as well as grouping the grenadier companies of the

³¹ Charles Lennox, 3rd Duke of Richmond (1735–1806).

³² David Blackmore, *Destructive & Formidable, British Infantry Firepower 1642–1765*, (London: Frontline Books, 2014) pp.132–33.

³³ These regiments were the 20th Kingsleys, 25th Edinburgh (Holme's) and 51st Brudenell's.

³⁴ Anon, *New regulations for the Prussian infantry*, pp.35–36.

³⁵ Campbell Dalrymple, p.80.

³⁶ Maurice Count de Saxe, *Reveries or Memories concerning the Art of War* (Edinburgh: Sands, 1759).

regiments into their own battalions. The first battle the British infantry were part of was the Battle of Minden on 1 August 1759, the British army having arrived in late 1758. The extended period of time from arriving to taking part in its first battle suggests that the army was not ready for combat when it arrived. In this time extensive training on the alternate fire drill was practised as prescribed by Lord Sackville, the British commander, as the military order books testify:

It is recommended to the commanding officers to practise chiefly the alternate firing, firing from right and left by grand divisions, sub-divisions and platoons. His Lordship expects that the regiments will strictly conform to this order and that he shall not see for the future one regiment practising differently from another, and of course producing confusion in the service.³⁷

In fact Lord Sackville issued the regiments with a large amount of powder with which to train, the order books for 9 April 1759 stating:

Lord George Sackville has ordered three barrels of powder to be brought to town for each battalion, each regiment is to keep 18 rounds per man and the best (?) powder, and may make use of the remainder to practise firings.³⁸

This extended period in which to practice the new alternate firing drill served the regiments well during the battle of Minden, where it was their firepower that defeated the French cavalry and infantry in the centre; Major Estorff commented on the vast amount of French casualties on the field were from the Gendarmerie and Saxon infantry, formations that the British infantry defeated.³⁹ The letter from the Marquis de Contades to the Duc de Belle-Isle published in the London Chronicle gives a glimpse at the fighting style of the infantry at Minden. The letter states:

³⁷ The Hon. Frederick Lindley Wood, M.L.S. Clements, S. Phillip Unwin, *Historical Manuscripts Commission, Report of Manuscripts*, vol. VIII (Hereford: The Hereford Times Ltd, 1913) pp.560–61.

³⁸ *Ibid* p.561.

³⁹ ADD MS 32894, fol. 75.

Alas! What availed us the gasconades published at Paris, of cannon and musquetry (sic) which would give fire immensely quick? [...] Our musquetry, indeed, fired faster and oftner, being discharged sooner, and at a greater distance; but the enemy reserved their fire till they discharged it in our teeth; by which means they did thrice the execution; and then rushing in with their bayonets, prevented our troops from firing away more.⁴⁰

This description furnishes us with several details, such as the reservation of the infantry fire until within suitable range, as the regulations called for, as well as the Prussian style attack with the bayonet after the initial volley fire. Both were utilised successfully and allowed the vastly outnumbered infantry to defeat their enemy multiple times.

Discipline and morale upon the battlefield were crucial factors in the success of the British infantry. The infantry's cool nature while under fire has been testified in many battles during the eighteenth century, including during the Seven Years War. The maintenance of discipline at Minden was one of the clear examples of this. The attack had come under the fire of two large French batteries as well as supporting infantry, and caused considerable carnage amongst the men, yet the ability to maintain order and discipline under this extreme psychological stress, especially in the knowledge that if the men broke they would be annihilated by the French cavalry is commendable.

Captain Wilson, Aide de Camp to General Waldegrave, described how the 'carnage was most dreadfull I ever saw' yet the 'true gallantry of our men cleared all'.⁴¹ Prince Ferdinand was so impressed with the British infantry that he gave them particular thanks in his orders of the day, and declared that 'next to God he attributes the Glory of the Day to the Intrepidity and Extraordinary Good behaviour of these troops'.⁴² The infantry's discipline and valour was witnessed in all the battles in Western Germany,

⁴⁰ Anon, 'A letter from Mons. De Contades to Marshal Belleisle, in answer to his published in the London Gazette of the 18th August', *The London Chronicle*, 11 September 1759, p.255.

⁴¹ ADD MS 49606, fol. 69.

⁴² Ibid, fol. 68, mention must be made that the British infantry were not the only troops commended, as the Hanoverian infantry who advanced under Sporcken were also given particular thanks. See also ADD MS 32894, fol. 74, for Major Estorff's commendation of the Infantry under Sporcken.

such as at Vellinghausen, where Lord Granby stated how he could: ‘Never sufficiently commend the zeal and steady bravery of the troops. They not only showed the greatest spirit and resolution in action, but also the greatest patience and firmness during a very long and severe cannonade’.⁴³ This discipline was influenced by the work of the officers and non-commissioned officers in the Regiment. Their actions in steadying the men, and keeping them in line, sometimes forcefully, enabled the infantry to maintain order in the field and keep fighting until the opposite side broke. Kane’s description of the officer’s placement best describes this:

The Lieutenant-Colonel, or, in his Absence, the eldest Captain, posts himself eight or ten Paces from the Rear Rank opposite the Center, the rest of the Officers, posting themselves four Paces from the Rear Rank, extending to the Right and Left to cover the Battalion, where they will be of as great Use as those in the Front, in seeing that the Soldiers keep up in their Ranks and do their Duty.⁴⁴

Closing with the enemy was not laid down in the regulations but was a feature of both the Prussian regulations and Dalrymple’s work. This aggressiveness was applied in Western Germany, where there were multiple instances (apart from the previously described evidence at Minden) in which the British infantry closed with the enemy. At Vellinghausen on the 16 July 1761, the infantry engaged with the French in the close confines of the woods, as Corporal Todd describes: ‘We kept still Advancing through Bushes & thick Wood, very perteaquing, & Often the Enemy upon the Oneside & we upon the Other, which caused us to make use of our Bayonets very Oftens.’⁴⁵ This could have been due to the confines of the wood, where the only way to engage the enemy was to attack with the bayonet. Duffy believes that attacks with the bayonet were rare

⁴³ London, National Archives Kew, SP 87/41 fol. 111.

⁴⁴ Richard Kane, p.114.

⁴⁵ William Todd, *The Journal of Corporal Todd, 1745–62*, ed. Andrew Cormack and Alan Jones (Thrupp: Sutton Publishing for the Army Records Society, 2001) p.166.

during the eighteenth century, and that they usually took place when the ‘normal relationships of space did not apply’, as in the assault of an entrenchment, town or wood, such as at Vellinghausen.⁴⁶ Yet the actions of the Grenadiers at Warburg, where the fighting took place on an open hillside and valley, suggests otherwise. The two grenadier battalions of Maxwell and Daulhat had advanced to capture the hill and tower of the Heyenburg, a feature that commanded the flank and rear of the French army. As it was an important feature the French attempted to recapture the position which led to a protracted bloody engagement. An anonymous journal described how:

The former [Maxwell’s regiment] was engaged with the Brigade of Bourbonnais, which it had forced back and was now advanced 300 yards beyond the Tower, where it took two pieces of the Enemy’s Cannon, and was pushing to make prisoners a group of French Officers who stood near them surrounding the Colours of their Regiment.⁴⁷

Though it omits any mention of attacking with the bayonet, the Grenadiers would have had to utilise these weapons to capture the colours from the French troops, who would most likely have defended them to the death. The creation of grenadier regiments was an adoption of the system employed by their German allies. The British grenadier regiments were developed by taking away the line infantry regiments grenadier companies and clumping them together into ad-hoc battalions, which would be used as elite shock troops in battle. The British grenadiers were repeatedly utilised by Prince Ferdinand to lead his forces into the attack to exploit a weakness, such as their actions at Warburg, or the surprise assault at the battle of Kloster-Kamp. The grenadiers were equally proactive in the final attack at the battle of Vellinghausen, as the anonymous journal describes:

⁴⁶ Christopher Duffy, *The Military Experience in the Age of Reason* (London: Routledge, 1987) p.205.

⁴⁷ London, British Library, ADD MS 28551 fol. 43.

About this time (9 in the morning) Prince Ferdinand ordered the British Grenadiers to pass the Landwher on the right and to gain the height so often mentioned which was instantly done the Enemy however had already quitted and were then entering the Wood; but being pursued by the Grenadiers who got immediately upon their flank [...] their rear Guard was intercepted before it could reach the Village of Brunningsen where the greatest part of the Regiment of Rouge consisting of 4 Battalions with their Cannon & Colours were taken by Maxwells Battalion of Grenadiers.⁴⁸

However, the proactive attacking nature of the British infantry was not always witnessed on the battlefield. At Kloster-Kamp, 16 October 1760, the British infantry did not close with the French, instead following the British regulations style by relying on a protracted firefight. This ultimately negated the momentum the Allied army had achieved through its surprise assault. The Baron Besenval suggested that both sides had not engaged in close combat as each forces casualties lay where they had fallen in opposing lines: ‘Le champ de bataille était jouché de morts, sans qu’on vit un seul uniforme des ennemis sur notre terrain, ni un seul uniforme français sur celui des ennemis.’⁴⁹ The Allied army was not always on the attack, and two battles of the war indicate the defensive attributes of the infantry. At the battle of Corbach in 1760, the two battalions of Carr and Brudenell had to cover the retreat of the Allied army. This manoeuvre was an exceptionally difficult one, as attested by Richard Kane,⁵⁰ who describes a system for retreat, by which the regiment would occasionally turn to fire upon the enemy when they came close. The rear guard action of the two battalions was successful, and merited ‘Prince Ferdinands thanks for their good behaviour’ though it was the supporting cavalry of Bland’s and Howard’s Dragoons that saved the infantry from being overwhelmed by the French light troops.⁵¹ Meanwhile, at Vellinghausen,

⁴⁸ London, British Library, Add MS 28552 fol. 27.

⁴⁹ Baron de Besenval, *Memoires du Baron de Besenval* (Paris : Baudouin Frères, 1821) p.95.

⁵⁰ Anon, *A system of camp discipline, military honours, garrison*, pp.50–51.

⁵¹ ADD MS 28551 fol. 21.

despite being drastically outnumbered, as the six British and two Hanoverian battalions faced a considerable portion of Marshal Broglie's force, they managed to hold onto their defensive position on top of the Dinckerberg, launching several counterattacks themselves to sustain the position.⁵²

Despite the general belief that linear warfare of the eighteenth century was slow and cumbersome, several actions of the Seven Years War indicate that it wasn't always the case. The pace of the advance at Minden put the French under great pressure; as they were unable to shift their reserves in a concerted effort to meet the oncoming attack, forcing them to retreat. Major Estorff reported how 'Towards six o'clock, the Enemy surprised at the vivacity of our motions, lost ground, and folded with haste'.⁵³ Equally at Warburg, the Hereditary Prince's efforts in quickly bringing his columns up and deploying them into line posed serious problems for the French commander the Chevalier de Muy, a journal describing:

In the mean time the 2nd Column arrived leaving the Village of Ossendorff on its right and occupied the height where the 6 pieces of cannon were placed. The 4th Hessian Guards formed on the left of Scheither and the 3 Battalions of Brunswick Grenadiers on the left of them. All this was executed with surprising rapidity, the Battalions marching to the Attack as fast as they arrived.⁵⁴

However there were also several cases where the ponderous nature of the British infantry caused problems for the Allied army. At Warburg the main body of infantry could not advance quick enough to support the Hereditary Prince's flank attack, as the boggy ground near the Dymel River, as well as the extreme heat, sapped the men's strength.⁵⁵ Furthermore, at the Battle of Kloster-Kamp the failure of the reserve infantry

⁵² Anon, *The Aberdeen Magazine for the year 1761* (Aberdeen: Francis Douglas, 1761) p.392.

⁵³ ADD MS 32894 fol. 73

⁵⁴ ADD MS 28551 fol. 43.

⁵⁵ London, British Library, ADD MS 35839 fol. 206.

to come up in time eventually cost the Hereditary Prince victory. While the Battle of Wilhelmstahl was notable for the lost opportunity of surrounding the French army, due to the slow advance of the British infantry.

Ultimately, the British infantry developed for themselves a reputation of coolness in combat, coupled with a devastating fire delivered from their volleys. These factors had been developed in the wars of the Spanish and Austrian Successions, and the trend was to continue during the Seven Years War, with battles such as Minden and Vellinghausen heavily influenced by the actions of the infantry. By turning away from the regulations and adopting the alternate fire system, as well as utilising the aggressive nature of the British infantry, these factors regularly saw them succeed over their opponents, and ultimately identified the British infantry as a crucial part of the Allied army's success in Western Germany.

Cavalry

Though the efficacy of cavalry during the eighteenth century is much debated, the success of the British cavalry during the many engagements of the Seven Years War cannot be disputed. This chapter will investigate the cavalry tactics laid down in the British regulations, as well as several works that affected their style, ultimately relating how they fought in Western Germany compared to this literature. Making up only a small portion of the army's numbers, as well as posing the problems of a high-maintenance cost, this force could provide mobility and shock value in certain situations. The British cavalry of the late-eighteenth century were often regarded as a poor force, with the Duke of Wellington later issuing the famous judgement of how they would 'gallop at everything'.⁵⁶ However, they were not always that ill-disciplined. In Western Germany the cavalry would show a professionalism in their trade, yet also the aggressive dash that would go on to later typify their arm. Several accounts such as the anonymous journals of the war, as well as the reports by Prince Ferdinand of Brunswick, testify to the success of the British cavalry in battles such as Corbach, Emsdorff and Warburg.⁵⁷

Though the action between armies in the Seven Years War usually developed into a brutal firefight, a well-timed cavalry attack could unlock a stalemate. The famous attack of General Friedrich Wilhelm von Seydlitz's cavalry at the Battle of Rossbach highlighted their continued importance on the battlefield.⁵⁸ As opposed to the infantry

⁵⁶ Richard Holmes, *Redcoat: The British Soldier in the Age of Horse and Musket* (London: Harper Collins, 2002) p.223.

⁵⁷ Anon, *The operations of the Allied Army under the command of his Serene Highness Prince Ferdinand Duke of Brunswick and Luneberg beginning in the year 1757 and ending in the year 1762* (London: T. Jefferys, 1764); London, British Library, ADD MS 28551; London, British Library, ADD MS 28552; London, British Library, ADD MS 35839 fol. 206.

⁵⁸ General Friedrich Wilhelm von Seydlitz, Lieutenant General in the Prussian army (1721–1773).

battalion the basic unit of cavalry was the squadron, usually numbering 130–160 officers and men.⁵⁹ The squadron would be deployed in two lines, with enough of a gap between each line so that any injured or killed in the first rank would not hinder the movement of the second, but also close enough so that the momentum of the second rank would push the first one on in a melee. The whole mass of cavalry in a European army would usually be deployed on the flank in two lines, with a third line acting as a reserve. However, the British cavalry in the Seven Years War only deployed in two lines. This could have been a weakness if any of the cavalry engagements during the war had lasted for a protracted period, as the lack of the third line would have left them without the support to sustain an attack or exploit any breakthrough. Unlike the infantry, the first rank of cavalry was of great importance, as they were the first to engage and so would be composed of the best men.⁶⁰ The *Field-Dienst Regulament* of the Austrian army called for ‘thoroughly good and reliable men who are mounted on sound horses’ in the first rank to provide the greatest amount of shock impact, while the Prussian cavalry mirrored this in its regulations calling for the tallest men in the first rank.⁶¹ The quality of the horses was of importance to the Duke of Cumberland, the British commander-in-chief,⁶² who issued commands only to obtain mounts between the height of fifteen hands–fifteen hands two inches ‘with light feet, and clean Sinewy legs’ who were ‘nimble and active movers’.⁶³ This had been a similar development in the Prussian army, where Frederick the Great improved his cavalry by decreasing the large heavy horses and employing smaller, more nimble ones.⁶⁴ In fact the quality of the British

⁵⁹ Christopher Duffy, *The Military Experience in the Age of Reason* (London: Routledge, 1987) p.222.

⁶⁰ Ibid p.222.

⁶¹ Ibid p.222; W.M. Faucitt, *Regulations for the Prussian Cavalry* (London: J. Haberkorn, 1757) p.5.

⁶² Prince William Augustus, Duke of Cumberland (1721–1765), Commander in Chief (1745–1757).

⁶³ Rev. Percy Sumner, ‘Standing orders for the Dragoons, circa 1755’, *Journal of the Society for Army Historical Research*, vol. 23 no. 95 (1945) (98–106) p.100.

⁶⁴ Brent Nosworthy, *The Anatomy of Victory: Battle Tactics 1689–1763* (New York: Hippocrene Books, 1992) p.166-67.

horses is supported in the anonymous *The beauties of nature and art displayed, in a tour through the world*, where it states:

The horses for the saddle and the chace (sic) are beautiful, and well proportioned: the draught horses are scarce to be matched anywhere: of these the British cavalry consists, which is reckoned the best for charging in the world.⁶⁵

While cavalry could be effective on the battlefield, it was usually limited by the geography of the area. The ideal topography for a cavalry battle was a flat plain, the stable ground enabling the velocity of horse and rider to deliver a crushing charge. Yet the Western German topography featured battlefields that were rarely flat with an open plain, and as such cavalry were usually relegated to casual observers as the infantry began their murderous firefight. Numerous cases, such as Bergen, Vellinghausen and Kloster Kamp, witnessed battlefields that were hilly and forested or featured obstacles such as a canal or boggy ground, which negated the use of the cavalry. Even in the famous victory for the 15th Light Dragoons (Elliot's Regiment) at Emsdorff, the cavalry encountered difficult ground from which they could not engage; a journal describes how 'The Enemy continued their retreat over the River Klein by the Bridge of Blasdorff. The banks of this little River were morassy which made it impracticable for the cavalry to attack.'⁶⁶ Only once Major-General Glaubitz's⁶⁷ Infantry had emerged onto the open plain towards Nider Klein was an attack facilitated. Furthermore cavalry rarely engaged each other due to the morale factor. The action of two sides crashing together and developing into a swirling melee was usually never seen, as one side typically panicked and gave way before coming together.⁶⁸ The Battles of Emsdorff and Warburg are good examples of this, as the French cavalry fled on both occasions before contact was even

⁶⁵ Anon, *The beauties of nature and art displayed, in a tour through the world etc* (London: J. Payne, 1763) p.10.

⁶⁶ London, British Library, ADD MS 28551 fol. 26–27.

⁶⁷ Major-General Christian Baron von Glaubitz, commander of the French forces at Emsdorff.

⁶⁸ Richard Holmes, p.238.

made.⁶⁹ Cavalry were more willing to engage when directed against the flank of the enemy. At Warburg, Prince Ferdinand described how though the French cavalry ‘folded without waiting for the shock’, the remaining three squadrons of the Bourbon Brigade engaged the British as they were directed against the flank of Bland’s Regiment of cavalry.⁷⁰

The regulations for British cavalry combat prior to the Seven Years War were placed down in two works: *Exercise for the Horse, Dragoon, and Foot Forces* in 1728 and the Duke of Cumberland’s *Standing Orders of the Dragoons* in 1755.⁷¹ It is in this latter work that the tactics for the charge are described. The attack was begun at a walk or slow trot, whereupon they would increase their speed to ‘a round trot at three score yards from the Enemy and never at a greater distance’.⁷² These orders, delivered circa 1755, focused on attacking only at a fast trot, indicating a wish for order to be maintained throughout the attack rather than prioritising speed. The importance of order over speed was paramount, as the men were to form ‘close to the croop’, a designation which describes the cavalymen being as close as possible when delivering the charge, which could only be achieved at a slow pace.⁷³ The orders called for the cavalry to ‘make a kind of Oblique half Wheel’ so that they could come down on the flank of the enemy squadron. It was unlikely this manoeuvre was successfully executed in combat given the low level of training within the British cavalry.⁷⁴ With the advent of the Seven Years War, cavalry doctrine had changed very little since the War of the Spanish Succession. The 1728 regulations set down the common cavalry doctrine, which was

⁶⁹ I hasten to add that the Bercheny Hussars at Emsdorff were vastly outnumbered by the 15th Light Dragoons, Luckner’s Hussars and Freytag’s Jaegers, which could have aided the mental aspect of their withdrawal.

⁷⁰ ADD MS 35839 fol. 208

⁷¹ Anon, *Exercise for the Horse, Dragoon, and Foot Forces* (Dublin: Andrew Crocke, 1728); Rev. Percy Sumner, ‘Standing orders for the Dragoons, circa 1755’, *Journal of the Society for Army Historical Research*, vol. 23 no. 95 (1945) (98–106).

⁷² Rev. Percy Sumner, p.102.

⁷³ Humphrey Bland, *A Treatise of Military Discipline* (London: John Knapton, 1753) p.315.

⁷⁴ Brent Nosworthy, p.228.

only touched upon in the later standing orders for the dragoons in 1755.⁷⁵ Both these regulations focused on the regular day to day running of the cavalry, such as the manoeuvres while on parade or usual camp duty, but gave little attention towards the actions of the cavalry in battle. This is possibly due to the limited aspects of cavalry combat, the charge being relatively the only focus; As Houlding aptly describes: the ‘role of the cavalry was well defined, its manoeuvres few, settled, and understood.’⁷⁶ These regulations were utilised in the War of the Austrian Succession, yet the poor performance of the British cavalry at the Battle of Dettingen, where many regiments refused to charge, fleeing before contact was made, indicated the cavalry needed further training.⁷⁷ The call for a slow organised attack could have exacerbated these problems, the slow pace giving the men a longer period in which to decide they didn’t want to attack. Yet the better performance of the cavalry at the later battles of Fontenoy and Laffeldt indicate that training was the greater problem, something which must have been rectified by the experience of campaign.⁷⁸

Literature published in the late-1750’s and early-1760’s may hint at a shift in British cavalry doctrine that would affect their tactics during the Seven Years War. The *Regulations for the Prussian Cavalry* was introduced to a British audience through the translation by W.M. Faucitt in 1757.⁷⁹ Being extensively sold around London by numerous publishers it would have gained a wide audience, especially as a vast amount of subscribers were cavalry officers.⁸⁰ It was also extensively advertised in the local newspapers. This book would have provided knowledge of the Prussian system of a

⁷⁵ J.A. Houlding, *Fit for Service: The Training of the British Army, 1715–1795* (Oxford: Clarendon Press, 1981) pp.197–98.

⁷⁶ *Ibid* pp.197–98.

⁷⁷ *Ibid*, p.352; Rex Whitworth *Field Marshal Lord Ligonier, The British Army 1702–1770* (Oxford: Clarendon Press, 1958) p.76.

⁷⁸ See especially the successful action of the British cavalry at Laffeldt in: Rex Whitworth, p.153–58.

⁷⁹ W.M. Faucitt, *Regulations for the Prussian Cavalry* (London: J. Haberkorn, 1757)

⁸⁰ See the subscriber list in W.M. Faucitt *Regulations for the Prussian Cavalry* (London: J. Haberkorn, 1757)

cavalry attack, which could only have gathered greater support for use in the British army due to the notable success of the Prussian cavalry at the Battle of Rossbach in late 1757.⁸¹ The Prussian regulations call for a much faster charge than what was prescribed in the British ones. The order for delivering the charge was as follows:

At the distance of about fifteen paces, they are to fall into a strong trot; afterwards into a gallop, taking care to keep in close order, and continuing that pace as far as from ninety to hundred and twenty paces, where they attack the Enemy.⁸²

This attack would be delivered with much greater speed compared to the standard British attack. The aim was to attack at a gallop over a considerable distance while still maintaining order, a feature not previously performed by the British cavalry. This was something the Prussian cavalry had been training on throughout the 1740's and 1750's. The description of the charge is somewhat limited, only providing the bare essentials in describing the most important manoeuvre of the cavalry, but that is usual of many of the military manuals of the time, where greater emphasis was given to parade evolutions. However, a more substantial description of the Prussian cavalry charge is provided by General Charles Emmanuel de Warnery,⁸³ one of King Frederick II's Cavalry Generals:

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At the first sound of the trumpet the whole begin to move forward, first and second line, and the reserve: The attacking wing perfectly dressed in line, marches on at a walk; at the second sound, which ought to be doubled, the whole begin to trot, (which the second line, and the reserve, continue to do till after the charge is finished) at the third sound, which is tripled, at about 150 or 200 paces from the enemy, the first line begins to gallop, and when they approach within 70 or at most 80 yards of the enemy, the

⁸¹ For a summary of the Battle of Rossbach see: Tim Blanning, *Frederick the Great* (London: Allen Lane, 2015) pp.217–19.

⁸² W.M. Faucitt, p.23.

⁸³ General Charles Emmanuel de Warnery (1720–1776).

⁸⁴ Frederick II King of Prussia (1712–1786).

trumpets sound gay and lively fanfares and flourishes of the trumpet, then the troopers prick with both spurs, and push forward at full speed, without however entirely slackening the bridle, as all the horses cannot gallop with equal velocity; but when within about twenty paces, they must force their gallop as much as possible, to give the full impulse of the charge.⁸⁵

This emphasis on speed and shock is equally called for in Campbell Dalrymple's *A Military Essay*. Written in 1761 it may support this shift in British cavalry tactics. Dalrymple writes how 'The squadron should next practice the charge, and by degrees bring itself to do it with great rapidity, without opening of ranks or files',⁸⁶ mirroring the style eschewed by the Prussians. The constant training needed to maintain the high level of ability in the charge was a major factor in the Prussian cavalry, and was equally encouraged by Dalrymple: 'The Charging in line must be very frequently practised, as every thing depends upon it.'⁸⁷ Yet according to Houlding the British cavalry did not extensively train wartime manoeuvres and so one wonders how well the British cavalry were able to execute the galloping Prussian style attack over a considerable distance.⁸⁸ Connected to this, towards the end of the war the Earl of Pembroke, who became Lieutenant-Colonel in the 15th Light Dragoons in 1763, wrote a treatise by which to train the soldiers for the use of the cavalry. Through this, he laments the poor quality of cavalry training, rendering them inferior to their European counterparts:

When the first regiment of light dragoons was raised under the command of my friend general George Augustus Elliot, we had frequent occasions to lament together the wretched system of Horsemanship, that at present prevails in the ARMY: A system, disgraceful in itself, and productive in its consequences of the most fatal evils: For

⁸⁵ Charles Emmanuel de Warnery, *Remarks on Cavalry*, trans. G.F. Koehler (London: J. Barfield, 1798) p.46.

⁸⁶ Campbell Dalrymple, *A Military Essay, Containing reflections on the raising, arming, cloathing, and discipline of the British infantry and cavalry* (London: D. Wilson, 1761) p.293.

⁸⁷ *Ibid*, p.321.

⁸⁸ J.A. Houlding, p.348.

troops in their own nature most excellent and brave, have been frequently rendered inferior to less powerful ones, both in men and horses, for want of proper instructions and intelligence in this Art.⁸⁹

Rather than delve more deeply into the training of the cavalry, which will need further analysis that this thesis cannot sufficiently cover, I wish to return to the subject of the charge. Its description in Campbell Dalrymple's work is more akin to the Prussian system than the earlier British regulations. Its format states:

The troop should charge with swords only, till men and horses are both perfectly steady, which a very little time, after such preparation, will be sufficient to accomplish. It should charge at the trot, and lastly at the gallop, keeping ranks and files close, for till they can do that, they are deficient; they must particularly avoid pressing too much to the center, as too great weight thrown there, must either lame the men or break the squadron.⁹⁰

The last remark gives us an insight into the motion of a cavalry charge, as the press of bodies in the surge of a galloping attack could equally be dangerous for the men participating. The best example of this factor is given by Mottin de la Balme, who was a Captain in the *Gendarmerie* who charged the British Infantry at Minden:

To begin with the advance had the effect of squeezing the centre, and then the wings felt the pressure... when we were only about fifteen paces away our horses tried to escape by throwing themselves to left and right. The force exerted by this phenomenal pressure became enormous [...] Only a few men were killed by the enemy fire, but many suffered contusions or broken or dislocated limbs, and a number were suffocated or trampled under the horses' hooves after falling from the saddle.⁹¹

⁸⁹ Henry Earl of Pembroke, *A method of breaking horses and teaching soldiers to ride* (London: J. Hughes, 1762) pp.I–II.

⁹⁰ Campbell Dalrymple, p.281.

⁹¹ Mottin de la Balme, *Éléments de tactique pour la cavalerie* (Paris: Jombert, 1776) pp.106–07.

All these factors would indicate that extensive training would need to take place to maintain a high level of standard for the cavalry, not only maintaining order in the attack but ensuring that this cohesion was not lost while undertaking the gallop over an extended distance. As no cavalry regulations were produced during the war, I have found no evidence for the extent to which these lessons were adopted into the army, so I can only surmise from the accounts of the battles the degree to which this new Prussian style was utilised.

During the course of the Seven Years War we observe an adoption of the new Prussian doctrine, where galloping attacks began to be undertaken over greater distances. While the British cavalry was not utilised at Minden in 1759, we can discern a great deal from a statement made by Lord George Sackville, the British commander in Germany, about the tactics used at this battle:

[I] Ever found the greatest difficulty in preserving intervals, or even the appearance of a line, without a considerable attention to their motions, and stopping the first appearance of irregularity. To attack with vigour and velocity, you must advance without hurry or confusion.⁹²

This suggests his utilisation of the standard British tactics, as Sackville was more interested in maintaining order within his squadrons, rather than moving with speed. This was anathema to Frederick the Great, who critically stated: ‘All movements of cavalry are swift. It can decide the fate of a battle in one instant. It must be used only at the right time.’⁹³ This brings us to the famous event of the Battle of Minden, the inactivity of the cavalry. Whether you subscribe to the standard historical belief that Lord Sackville was the culprit in the vacillation of the cavalry, or Stuart Reid’s analysis supporting Lord Sackville’s actions, based on the testimonies from the court martial

⁹² Christopher Duffy, p.224.

⁹³ H.C.B Rogers, *The British Army of the Eighteenth Century* (London: Allen and Unwin, 1977) p.78.

reports,⁹⁴ it is safe to say that the lack of a cavalry attack at the critical juncture of the battle diminished the Allies success.

The Battle of Warburg provides us with the knowledge of the shift in tactics due to its contrast with Minden. An anonymous Journal describes how the advance was conducted ‘with surprising rapidity’ and that ‘The column continued its march rather quickening than slackening its pace, and being arrived at Meine His Lordship ordered the Line of Battle to be formed, still however keeping advancing.’⁹⁵ Though this doesn’t describe how the charge was carried on in, the knowledge that the line of battle continued to increase its pace towards the French cavalry is very reminiscent of the Prussian style. The vigour of the attack possibly influenced the French cavalry retreat, as they perceived their opponents were more willing to engage with them, which could have affected their morale. Though the actions at Warburg seem to suggest this new approach, it would probably have been clear that they could not fully execute this style in the Prussian manner, because of their relative inexperience in conducting it. The squadrons would have lost cohesion fast when at the gallop over an extended period of distance, compared to the Prussian cavalry, who were able to maintain alignment at speed as they had gone through a period of a decade in trying to perfect this style. In fact riding drill was undertaken every day to maintain a high level of ability, something the British cavalry were not able to match.⁹⁶ The lack of proper application of this style is inferred from an anonymous journal. In the final stage of the battle against Fischer’s Corps, the Journal describes how:

In this attack the left squadron of Mordaunts received a full fire from the Enemy at the distance of 30 paces, by which Major Davenport, another Officer and some men were

⁹⁴ Stuart Reid, *The Battle of Minden 1759: The miraculous victory of the Seven Years War* (Barnsley: Frontline Books, 2016) pp.109–15.

⁹⁵ ADD MS 28551 fol. 44.

⁹⁶ For the level of training conducted by the Prussian cavalry see: Brent Nosworthy, pp.166–67.

killed. This was owing to having checked their horses at the instant they should have gone through the Enemy's line.⁹⁷

The last sentence indicates that the men were travelling at a slower pace than at the gallop, as the men would not have been able to 'check their horses' had they been riding at full speed, otherwise they would have been crushed by the men coming up in the rank behind.

The aggressive nature of the British cavalry was evident throughout the war, especially at the battle of Corbach. The desperate charge by Bland's and Howard's Dragoons, undertaken in the knowledge that they were vastly outnumbered by their opponents, rescued the rear-guard of the British infantry.⁹⁸ This may indicate a zeal which wasn't found in the French, who retreated at both Emsdorff and Warburg before coming to blows.

Having dealt with the enemy cavalry, the British cavalry would then turn their attention towards the enemy infantry. The engagement of cavalry against infantry usually took place at the end of a battle, with the cavalry being especially effective against infantry who had broken from the supporting structures of their regiments.⁹⁹ This was shown most clearly by the 15th Light Dragoons at Emsdorff or the actions of Conway's Regiment and Breidenbach Dragoons at Warburg, where they 'attacked and drove the French cavalry and afterwards falling on the Swiss Infantry took Major General Lockman with the greatest part of the Regt. Of Planta prisoners.'¹⁰⁰ However if the opposing infantry maintained its order, it was extremely difficult for cavalry to find any success against them. If the infantry held their fire to the last minute, delivering it at

⁹⁷ ADD MS 28551 fol. 45–46.

¹ Ibid, fol. 21. In fact the two squadrons of British Cavalry were vastly outnumbered by the ten squadrons of French cavalry made up of the Turpin Hussards and Beaufremont Dragoons.

⁹⁹ Christopher Duffy, p.228.

¹⁰⁰ ADD MS 28551 fol. 45.

a close range, this usually cut down the front rank of the cavalry, eliminating the shock impact of the horse. This would also then hold up the cavalry in the successive lines behind, as they would find it difficult to move past the barrier of injured men and horses. It was also hard for cavalry to cut their way through ranks of infantry who stood firm and presented a line of bayonet points. If the enemy infantry were organised, disciplined, and maintained their fire control, the cavalry would likely be repulsed. As Richard Kane stated:

If we have Resolution to keep Order, and avoid Hurry, there is no reasonable Body of Horse dare venture upon us. It is not to be imagined, how the Fire of one Rank will stop and disorder Horse; and then a second, and a third on the Heels of it, will certainly send them packing.¹⁰¹

Yet the effect of cavalry on a retreating enemy was profound, with no better example being that of the 15th Light Dragoons at Emsdorff. Having dispersed the enemy Bercheny Hussards earlier in the day they had reformed and tailed the retreating body of infantry under General Glaubitz, forming on the heights between Kirkhain and Langenstein with the aim of cutting off the French retreat. The French infantry are described as having formed in column, and due to the heat of the day and the previous forced march, the allied infantry had been unable to come up and support the cavalry. A Journal describes the attack as follows:

Elliot's Regiment formed on the Enemy's right flank two deep in one Line, and then composed of four Squadrons, and when they had advanced within 100 yards of them the French faced and made ready and gave their fire at the distance of about 30 paces.¹⁰²

¹⁰¹ Richard Kane, *Campaigns of King William and Queen Anne; from 1689 to 1712. Also, a new system of military discipline, for a Battalion of Foot on action* (London: J. Millan, 1745) pp.125–26.

¹⁰² ADD MS 28551 fol. 27.

The description of the French infantry delivering their fire at thirty paces is surprising, as it should have destroyed the oncoming first rank of British cavalry. One must therefore consider the psychological effects on a defeated force. The lack of accuracy in the French fire may be attributed to the panic induced by a cavalry charge on already dispirited infantry, who would be thinking more about escaping than fighting. This inaccuracy would have minimised casualties, allowing the front rank of cavalry to successfully use its speed and weight to smash through the French ranks. However, the journal also states:

The different Squadrons attacked at the same instant, two in the center and one on each wing. The two attacks on the wings succeeded well, the cavalry going thro (sic) that in the centre met with greater resistance, the Dragoons not penetrating at the first instant, till they had fired their carabines in the Enemy's faces when the regiment went fairly thro (sic) their line.¹⁰³

The success of the cavalry on the flanks suggests that the French infantry were already fleeing from the cavalry. This is inferred by the ease with which they broke through the body of infantry, as the cavalry would encounter less resistance due to the gaps created in the formation by the flight of the men. The journal's description of the use of carbines indicates the light dragoons proficiency in using these weapons, a necessary skill they would have learnt for skirmishing in the irregular tactics they had been employed for. The Earl of Pembroke advised that horses should be trained to be still in combat, stating:

All troop-horses ought to be very quiet and still to be shot off from, and taught to stop the moment you present; and not move after firing 'till the rider demands it; this especially ought to be observed in the light troops; in short, the horses must be taught to

¹⁰³ ADD MS 28551 fol. 27.

be so cool and undisturbed at it, as to suffer the rider to be free upon him, as if he was on foot.¹⁰⁴

The light dragoons were formed to provide similar services to the light cavalry in other armies such as picquet and patrol work, as well as covering the deployment of the cavalry on the battlefield. Their creation may have been influenced by the success of the Allied light cavalry such as the Prussian hussars or mounted elements of *Freytag's Jaegers*. The British army created six light dragoon regiments during the war, though only the 15th light dragoons served in Western Germany, and were in fact specifically requested by Lord Granby.¹⁰⁵ Having detailed their actions at Emsdorff, the 15th light dragoons were also successfully utilised in conjunction with the light infantry at Vellinghausen.¹⁰⁶ Light cavalry forces could be extremely useful in engaging the enemy while they were in retreat, using their speed and manoeuvrability to engage the enemy at weak points. This was in fact what happened at the Battle of Corbach, when Howard's and Bland's dragoons were needed to throw back the French light cavalry who were hindering the rear-guard of British infantry. The pressure exerted by these men was enough to warrant the desperate charge led by the Hereditary Prince of Brunswick himself. Yet this example also shows the advantages Heavy cavalry had over light cavalry when in combat, as the vastly outnumbered two squadrons of dragoons threw back the more numerous ten squadrons of the Turpin Hussards and Beaufremont Dragoons. Despite their inferiority to heavy cavalry, the action of the 15th light dragoons at Emsdorff showed that light cavalry forces had become a useful force on the battlefield as opposed to previous wars.¹⁰⁷

¹⁰⁴ Henry Earl of Pembroke, p.62.

¹⁰⁵ Major Richard Davenport, "*To Mr. Davenport*": *Letters of Major Davenport (1719–1760) to his brother...* Ed. C.W. Frearson, Special Publication no.9 (London: Society for Army Historical Research, 1968) p.82.

¹⁰⁶ ADD MS 28552 fol. 24.

¹⁰⁷ Brent Nosworthy, p.171.

Ultimately, the Seven Years War witnessed a shift in the British cavalry's tactical style. The Prussian influences were assimilated through the adoption of speed and shock, and the new innovation of light cavalry was copied from other European nations. The varying success of these influences is to be debated, especially as the change was in its early stages during the course of the Seven Years War, yet the success of the cavalry in its few engagements cannot be disputed. The inactivity of the cavalry at the later battles of Kloster-Kamp and Vellinghausen, means an evaluation of British cavalry efficacy in the later stages of the war cannot be appraised. Due to this we cannot identify whether the changes absorbed by the Prussian cavalry were fully assimilated, and utilised at a high level. Furthermore the efficacy of cavalry can be continually debated, as they were still limited by the topographical nature the battlefield, as well as creating a logistical burden on the army.¹⁰⁸ Yet despite this the British cavalry's successes in 1760, especially at Warburg, continue to highlight the importance cavalry could have on the outcome of a battle.

¹⁰⁸ J.A. Houlding, pp.292–93.

Light Infantry

During the beginning of the eighteenth century, light infantry began to once more critically effect the outcome of battles and wars. The Austrian army's successful use of irregular light infantry from their border provinces during the War of the Austrian Succession created a strong stimulus for military evolution. The armies that came into contact with these troops would invariably be at a disadvantage when trying to tackle their skirmishing skills. As such these armies attempted to copy them; the German forces providing their own jaegers, hussars, and the so called *freikorps*, while the French developed an array of irregular forces of their own.¹⁰⁹ These new ideas about irregular warfare were well written on, with the best literature coming from Maurice de Saxe, M. de La Croix, and Thomas August le Roy de Grandmaison.¹¹⁰

This chapter aims to deal with how the British army adapted to these new innovations and how though their European neighbours had been quick to adopt these new formations, the first half of the eighteenth century witnessed the British suffering from a lack of innovation. This slow process of reform was only begun during the Seven Years War, especially in America, as detailed by Stephen Brumwell.¹¹¹ The disaster of General Braddock's campaign towards Fort Duquesne, culminating at the Battle of the Monongahela, as well as the harshness of the topography and the irregular tactics of the natives, induced an evolution in British infantry tactics that would

¹⁰⁹ Brent Nosworthy, *The Anatomy of Victory: Battle Tactics 1689-1763* (New York: Hippocrene Books, 1992).

¹¹⁰ Maurice Count de Saxe, *Reveries or Memories concerning the Art of War* (Edinburgh: Sands, 1759) ; M. de la Croix, *Traité de la Petite Guerre* (Paris: Antoine Boudet, 1752) ; Thomas Auguste Le Roy de Grandmaison, *La Petite Guerre: ou Traité du service des troupes légères en campagne* (Paris: sine nomine, 1756).

¹¹¹ Stephen Brumwell, *Redcoat: The British Soldier and War in the Americas, 1755-1763* (Cambridge: Cambridge University Press 2002).

eventually culminate in the 1771 light infantry reforms.¹¹² This chapter investigates whether this evolution also took place in West Germany, where a completely different set of variables affected the warfare. The European campaign did not have the vastly wooded topography identified in America, nor the open-order tactics of the Native Americans. Instead the British army would come up against the irregular regiments of the French army who would test their ability to perform in this new form of *avant-garde* warfare. Their answers to these problems are best illustrated in two works by J.A. Houlding and Peter E. Russell.¹¹³ They describe how the British Army tackled the problem of irregular warfare through the hybrid use of their grenadiers, as well as utilising Highlanders, who provided an ethnic element with a different military culture who could utilise ‘small-war’ tactics. I will investigate whether these systems worked effectively during the campaigns in Western Germany, or were more of a stopgap before further evolution was needed. This would highlight the inadequacies of the British Army in dealing with these problems, also identifying whether there was a stagnation in reform compared to the changes being conducted in the ‘American Army’.

With the advent of the eighteenth century, most notably during the War of the Austrian Succession, light infantry once again came into the fore, utilising their skirmishing ability and fluid tactics to affect the course of a battle. Houlding describes how the Austrian development of light infantry originated from the Balkan nobility employing ‘bands of these rough Slavic frontiersmen to suppress bandits and Turkish raiders’.¹¹⁴ Many of these provincial troops answered Maria Theresa’s call for help during the War of the Austrian Succession and wreaked such havoc on her enemies that

¹¹² J.A. Houlding, *Fit for Service: The Training of the British Army, 1715–1795* (Oxford: Clarendon Press, 1981) p.251.

¹¹³ J.A. Houlding, *Fit for Service: The Training of the British Army, 1715–1795* (Oxford: Clarendon Press, 1981); Peter E. Russell, ‘Redcoats in the Wilderness: British Officers and Irregular Warfare in Europe and America, 1740 to 1760’, *The William and Mary Quarterly*, vol. 35, no.4 (1978) 629–52.

¹¹⁴ Peter E. Russell, p.631.

they in turn developed ways to defend against them.¹¹⁵ As C.T. Atkinson details ‘not only the Prussian Army, but those of other German Princes found themselves compelled to pay the Austrian light troops the compliment of imitation’,¹¹⁶ as they developed their own formations of irregular jaegers, *freikorps* and hussars. The French, in turn, having encountered the pandours and hussars in Bohemia, Alsace and the Low countries, developed their own formations. The French formed units called *Volontaires*, *Compagnies Franches* and *Hussards*, one of whom was the famous Regiment de Grassin, who were used to skirmish in open order against their enemies.¹¹⁷ These troops were trained to use any cover provided by the terrain, with the fire being:

Voluntary, aimed, and not coordinated by orders. This tactic was referred to as *dibandade*, literally meaning “helter skelter” and referred to the frenetic quality of the fighting, which was totally left to the capabilities, and initiative of the individual soldier.¹¹⁸

The adoption of these irregular tactics were further encouraged through the experimental training conducted by the French Army during the early part of the eighteenth century. By utilising ‘camps of instruction’ (a form of practical field training) the French practiced merging light infantry tactics with regular closed order tactics. They attempted this by forming platoon-sized piquet’s in each battalion who would provide a screen for an advance, occupying any ‘advantageous terrain such as a hedge, mill, or the border of woods’.¹¹⁹ Maurice de Saxe had already posited that the fire from these light troops:

¹¹⁵ Brent Nosworthy, p.211.

¹¹⁶ C.T Atkinson, ‘The Highlanders in Westphalia, 1760–62: And the development of light infantry’, *Journal of the Society for Army Historical Research*, vol.20 no.80, (1941) 208–223 (p.209).

¹¹⁷ Peter E. Russell, p.633.

¹¹⁸ Brent Nosworthy, p.214.

¹¹⁹ *Ibid*, p.214.

Would be more effective than anything that could be dished out by the line troops using ‘volley fire’, suggesting that the advantage of taking time to aim your fire was far more effectual than blasting out a large volume of fire from the regiments.¹²⁰

The British themselves were not isolated from these experiences. The Austrians had been allies in the Low Countries, and many officers witnessed first-hand the advantages of having light irregular troops at an army’s disposal. Though light troops were generally used in the ‘small-war’ of a campaign, their unique skill set also made them useful on the battlefield. The best known example was of the actions of the Regiment de Grassin during the Battle of Fontenoy.¹²¹ The British Army’s mistake in not clearing this regiment from the wood of Barry brought dire consequences during the battle, as their well-aimed withering fire on the infantry columns flank caused considerable losses. A body of British light troops could have effectively skirmished with the enemy, forcing them out of the wood, thereby decreasing the loss caused to the rest of the army. As we have seen from adjustments made to the French and German armies, the lack of provincial irregular allies should not be an excuse for the lack of British light infantry.

The rebellion of 1745 also brought many examples from which the army could have learnt irregular tactics and applied them. After their defeat in open battle at Culloden, the Highland forces under Charles Edward Stuart conducted guerrilla warfare against the redcoats, using the wild terrain of the highlands and their agile ability to skirmish and then retreat. Evidence shows that the British adapted to these new methods of warfare, though in limited capability. They utilised their own pro-government Highland clansmen to provide a screen when advancing, as well as troops bound for

¹²⁰ Ibid, p.157.

¹²¹ For a relation of the Battle of Fontenoy see: Rex Whitworth, *Field Marshal Lord Ligonier, The British Army 1702–1770* (Oxford: Clarendon Press, 1958) pp.97–103.

America, such as the Georgia Rangers.¹²² The British infantry also became experienced in conducting raids against the Highlanders, due to the practice of fighting in the mountains for many months.¹²³ Ultimately then the experience on campaign gave the army many chances to adopt to these new tactics, as Russell stated ‘an examination of military operations in Europe and Scotland, where those commanders had gained their experience in the 1740s, reveals that they had ample opportunities to observe, combat, and occasionally to conduct guerrilla tactics.’¹²⁴

Meanwhile, during the 1750’s a new niche market on the subject was developing in military literature, especially in France. Extensive works were written on the tactics for not only defending against partisan attacks, but more importantly how to conduct them. Most of these works were written by French officers who had extensive experience in irregular warfare; most of the authors having participated in the actions conducted by the early light troop formations during the War of the Austrian Succession. M. de La Croix’s work *Traité de la Petite Guerre*,¹²⁵ published in 1752, was the first document which provided insight into how to conduct irregular warfare, based on his experiences with the *Compagnie Franches*. In the work he provided details on many aspects of the little war, such as conducting night attacks, ruses to successfully attack superior forces, and the importance of the soldier’s confidence in their officers. The most famous work was by Maurice de Saxe, entitled *Mes Reveries*, where he tackles many of the topics also discussed by La Croix.¹²⁶ Further writers such as Thomas August le Roy de Grandmaison, M. De Jeney, and Turpin de Crisse added further description to the burgeoning intellectual discussion on this military topic.¹²⁷

¹²² Peter E. Russell, pp.637–38.

¹²³ Ibid, pp.639–40.

¹²⁴ Ibid, p.630.

¹²⁵ M. de La Croix, *Traité de la Petite Guerre* (Paris: Antoine Boudet, 1752).

¹²⁶ Maurice Count de Saxe, *Reveries or Memories concerning the Art of War* (Edinburgh: Sands, 1759).

¹²⁷ Thomas August Le Roy de Grandmaison, *La Petite Guerre: ou Traité du service des troupes légères en campagne* (Paris: sine nomine, 1756) ; M. de Jeney, *Le Partisan ou l’art de de faire la Petite Guerre* (La Haye: H. Constapel, 1759) ; Turpin de Crissé, *Essai sur l’art de la Guerre* (Paris: Prault, 1754).

Several focuses of their work detail the attributes a partisan must exhibit, being ‘robust and strong as can be procured’,¹²⁸ as well as focusing on earlier ideals of meritocracy in selecting officers.¹²⁹ An emphasis was made in both De Jeney’s and Grandmaison’s works on the importance of understanding the geography of the region, going so far as to advise employing a geographer in your force, so that accurate reconnaissance of the topography could be made for the armies use.¹³⁰ This would have been extremely useful at the Battle of Hastenbeck, when General Chevert’s¹³¹ light troops discovered the woods and hills on the allied left flank were devoid of troops, and that the ground was also suitable to deploy on.¹³² This intelligence was critical in winning the battle for the French. These literary works were extensively sold in London, imported by a few publishers such as C.G. Seyffert and Paul Vaillant, yet despite this none of them had been translated in the 1750’s. Though many officers could read French, a translation may have allowed a much wider reader base, especially as these books were not extensively advertised in the papers.¹³³ This suggests that there was a market on this military topic for British readers, yet none of the lessons that could have been derived were adopted into the British army.

Despite this influx of French literature on the topic, the subject matter was not mirrored in British literature. Though Humphrey Bland’s work *A Treatise of Military Discipline* had a chapter dealing with the problems of partisan attacks and how to guard

¹²⁸ Thomas August le Roy de Grandmaison, *A Treatise on the Military Service of Light Horse and Light Infantry* trans. Major Lewis Nicola (Philadelphia: Robert Bell, 1777) p.13.

¹²⁹ M. De Jeney, *The Partisan: or the art of making war in detachment* trans. Anon (London: R. Griffiths, 1760) p.5.

¹³⁰ Thomas August le Roy de Grandmaison, *A Treatise on the Military Service of Light Horse and Light Infantry*, pp.41, 43, 118; M. De Jeney, *The Partisan: or the art of making war in detachment*, pp.8, 66, 70–71.

¹³¹ Lieutenant-General François de Chevert (1695–1769).

¹³² For a relation of the Battle of Hastenbeck see: Anon, *Neues Militärisches Journal* (Hannover, in der Helwingschen Hofbuchhandlung, 1788) pp.220–36

¹³³ See the Classified ads of the local newspapers of the time, especially: Anon, ‘Sold by all booksellers, and printed for C.G. Seyffert’, *Public Advertiser*, 16 March 1758, p.4.; Anon, ‘Just imported by C.G. Seyffert’, *Public Advertiser*, 19 December 1759 p.1; Anon, ‘New books, imported by Paul Vaillant’, *Gazetteer and London Daily Advertiser*, 11 May 1759 p.1.

against them, the descriptions were more reactionary, rather than giving advice on developing their own irregular tactics.¹³⁴ An important military treatise for the British army during the period, his work would have been well read and, as such, many officers would have gained insight on the limited actions to deal with irregular warfare. Bland seems to have a low opinion of these tactics, stating ‘though the Danger from such [irregular] parties cannot be very considerable yet the neglecting them may occasion you the loss of all your stragglers, your Baggage, and perhaps your Rear-Guard.’¹³⁵ This lack of discussion on irregular warfare was also observed in Richard Kane’s work *A New treatise of Discipline*, which details how a battalion of infantry must function on the battlefield.¹³⁶ By its omission of any description of light infantry, it suggests that the infantry did not fight in this capacity, neglecting any tactics for dealing with skirmishers during the campaign or on the battlefield. Despite the two main works giving little attention to the topic, Samuel Bever’s work *The Cadet, A Military Treatise by an Officer* noted down many translated military maxims from the continent, with one section dealing with Saxe’s discussion on irregular attacks during a march.¹³⁷ This work was aimed at officers joining the army, and may have given them a brief introduction into the partisan warfare of the time, to any who had not already ingratiated themselves with the French manuals. Overall, the blossoming scholarly discussion upon irregular forces during 1750–60 was such that the British army could not have been ignorant of it. Yet none of the major British works discuss how to actively engage in irregular warfare, nor were any of the lessons assimilated into the army from the French works. This could be a major reason as to why we see the army being poorly prepared to deal with this type of warfare at the start of the Seven Years War, to the extent that

¹³⁴ Humphrey Bland, *A Treatise of Military Discipline*, vol. 7 (London: John and Paul Knapton, 1753), pp.114–32, 138–39.

¹³⁵ *Ibid.*, p.123.

¹³⁶ Richard Kane, *Campaigns of King William and Queen Anne; from 1689 to 1712. Also, a new system of military discipline, for a Battalion of Foot on action* (London: J. Millan, 1745) pp.109-140.

¹³⁷ Samuel Bever, *The Cadet, A Military Treatise by an Officer* (London: W. Johnston, 1756) pp.24-35.

Grandmaison advises targeting the British forces on campaign due to their inability in dealing with this type of warfare.¹³⁸

Considering all the knowledge and experiences gained in irregular warfare prior to the Seven Years War, what changes did the British army adopt to utilise this way of war? To talk about light infantry in Western Europe, one must first touch upon the light infantry revolution initiated in America. The two theatres were not separate of each other, and we shall see some of the lessons the ‘American Army’ learnt applied in Europe. After the disastrous campaign of General Braddock against Fort Duquesne, culminating in the Battle of the Monongahela, the British had begun to realise the importance of irregular warfare in the deeply forested and mountainous topography of North America. British redcoats were unaccustomed to this type of warfare, and as such this ‘guerrilla warfare made a profound impression on troops whose peacetime training catered exclusively for the ritualistic combats characteristic of the open European battlefield.’¹³⁹ The early use of Rangers and Native allies provided the frontier tactics evident during the long ranged patrols conducted during this theatre. Russell best sums it up when he states ‘frontier tactics depended on small, mobile bands of woodsmen who used surprise attacks to create confusion, concealment to nullify enemy fire, and flexible alignments to reduce the effects of counterattacks.’¹⁴⁰ However, these units lack of discipline brought about the creation of the light infantry companies.¹⁴¹ As early as 1758 these light companies were being introduced, whereby ‘each regular battalion was to furnish 30 or 40 men’¹⁴² to be used as light infantry, where they would be trained in skills such as ‘marksmanship, “running and leaping”, firing independently from

¹³⁸ Thomas August le Roy de Grandmaison, *A Treatise on the Military Service of Light Horse and Light Infantry*, p.350.

¹³⁹ Stephen Brumwell, p.194.

¹⁴⁰ Peter E. Russell, p.629.

¹⁴¹ Stephen Brumwell, p.228.

¹⁴² *Ibid*, p.229.

cover'.¹⁴³ As seen before in the experiments by the French, though utilised far more extensively, the British light infantry were used in the same manner. They aimed to seize 'every commanding ground till the line has passed'¹⁴⁴ and would 'concentrate on harrying the enemy's flanks and mounting an active pursuit. Should the army be attacked while forming up, the light infantry would provide cover "by skirmishing to check the enemy"'.¹⁴⁵ The following quote from the Orders issued to the light troops before the campaign upon Louisbourg, expertly describes an early account of light infantry doctrine:

The Commander of the Light troops must teach his Corps to attack & to defend themselves judiciously always endeavouring to get upon the Enemy's Flank, and equally watchfull to prevent them surrounding them: They must be instructed to chuse good Posts, & to lay themselves in ambuscade to advantage [...] They must always march in [single?] Files, & generally fight in a single rank; pushing at the Enemy when they see him in confusion, and that the Ground favours their efforts; never pursue with too much eagerness, nor to give way, except in a very great inequality of numbers.¹⁴⁶

Ultimately, the men in the light company were increased and proved to be valuable, especially in the capture of Louisbourg and Quebec, such as when they scaled the cliffs and drove in the French/Canadian piquet's at the beginning of the Battle of the Plains of Abraham¹⁴⁷. These actions garnered extensive praise from their officers.¹⁴⁸ Though their creation had been to deal with the Native Americans and French/Canadian irregulars, combat experience had shown that the 'light infantry evolved within the "American

¹⁴³ J.A. Houlding, p.288.

¹⁴⁴ Stephen Brumwell, p.234.

¹⁴⁵ Ibid, p.518.

¹⁴⁶ Ibid, pp.233–34.

¹⁴⁷ Beckles Willson, *The Life and Letters of James Wolfe* (London: William Heinemann, 1909) p.510.

¹⁴⁸ Stephen Brumwell, p.230.

Army” had proved equally useful against more conventional opponents’.¹⁴⁹ As such could their lessons be transitioned over to the army in Germany?

Upon the start of the campaign in Western Germany, we have already seen how little had been done to adapt the British army in Europe concerning the new methods of irregular warfare. By the beginning of the campaign the lessons learnt in America had not been transitioned over to Europe. Time constraints may give us an explanation, as the lessons in America were only fully applied at the time of the Siege of Quebec, comparatively the same time as the Battle of Minden in Germany. The army did have limited methods to combat these new tactics during the early stages of the campaign. One method was the utilisation of picquets and quarter guards as ad-hoc skirmishers or for reconnaissance. As John Gittins states ‘The Picket Guard is a Body of Men always to be ready, lying with their arms in their Hands, to turn out in case of an Alarm.’¹⁵⁰ Each regiment had ‘One Captain, two Subalterns, three Serjeants, and Fifty Men’ for this task, who would be rotated every twenty-four hours.¹⁵¹ Once the quarter guard (an advanced post, numbering far fewer men than the picquet) were alerted by the enemy’s presence, they would give alarm by firing their muskets, at which the picquet would form up in front of the camp and then march out to assist. If the enemy continued to advance, the picquet would deign to hold off the enemy long enough for the army to form up ready for battle. This was most evident at the Battle of Vellinghausen where the picquets slowed the advance of Marshal Broglie’s columns. This suggests that this system was still utilised late into the war. Fortescue details how Lord Granby’s force was so unprepared for Broglie’s advance that they ‘had only just time to seize its arms and turn out, leaving the tents standing; the Highlanders indeed hardly emerging from

¹⁴⁹ Ibid, p.236.

¹⁵⁰ John Gittins, *A Compleat system of Military Discipline, as it is now used in the British Foot* (London: Printed by J. Humfreys, 1735) p.165.

¹⁵¹ Ibid, p.165.

their tents before the French guns opened fire on them.¹⁵² Fortescue's words indicate that the system had not worked efficiently enough, or that the men were not attentive to their duty. However, the journal of Corporal Todd, dated 13 July 1761, indicates otherwise:

We had strong Picquets who patrolled in every Corner as a report being spread throughout our whole Army that a Suspension of Arms or a peace was near at Hand, which was done by the Insinuation of the Enemy in Order to make us Less Delligent & Attentive in our Duty. It was recommended to us by Lieutt General Conway not to give any Credit to it until H.S.H. Prince Ferdinand himself had Declared it in Orders, but to keep ourselves Alert upon all Occations.¹⁵³

Todd continues to describe how the Prussian hussars warned the outposts that Marshal Broglie's force was advancing upon them, the time given at three in the afternoon, whereupon a messenger was sent to Lord Granby. He states how:

Our Drums was Order'd to beat to Arms, & Every Pioneer to quit his work & fall into his ranks, as we were not above 500 Men, both Advance Guards & Pioneers in all. We formed the line as far as we could stretch in Length [...] And in this posture we remain'd until 4 O Clock in the Afternoon.¹⁵⁴

These statements disagree with Fortescue, as they show that the advanced posts knew of the arrival of the enemy and were well prepared, which indicates their ability at reconnaissance. However they give us no clue as to whether the picquets were adept at utilising open-order warfare in the manner of irregular forces. Considering that the Battle of Vellinghausen was fought on the 15–16 July 1761, the lessons learnt in America could have been disseminated to Germany, though I have currently found no

¹⁵² J.W. Fortescue, *A History of the British Army*, vol. 2 (London: Macmillan and Co., 1899) pp.528–29.

¹⁵³ William Todd, *The Journal of Corporal Todd, 1745–62*, ed. Andrew Cormack and Alan Jones (Thrupp: Sutton Publishing, 2001) p.162.

¹⁵⁴ *Ibid*, p.164.

evidence of this. Given the topography, this small band of men if properly trained in the ways learnt in America, could have inflicted considerable damage upon the advancing French forces; using the trees and undergrowth to conceal themselves and skirmish with the enemy, they would have limited their own losses while still achieving their objective of holding up the enemy.

The other method of dealing with irregular tactics comes from the military treatise set out by Humphrey Bland in his book *A Treatise of Military Discipline*. He describes the use of the battalion's grenadiers to deal with the enemy skirmishers:

When the Enemy act upon the Defensive, and only endeavour to maintain their Post, if there are any Houses, Hollow-ways, Ditches, or Hedges in their Front, they commonly place Men in them to annoy the Line in their marching up to attack them. When this is the Case, the Granadiers [sic] should be ordered to march 30 or 40 Paces before the line, either in single Companies or Join'd, as the Service may require, in order to dislodge those Advanced parties that the line may not be ruffled, or interrupted in their marching up to attack.¹⁵⁵

This suggests a method whereby the grenadiers were utilised to counter the enemy's irregular forces, by dislodging them from important positions upon the battlefield. This could be due to their greater athleticism compared to the other men of the battalion, considering that these men were usually the largest and strongest. However, the manual does not indicate whether the grenadiers were trained in irregular warfare, the method proscribed being reactionary rather than a proactive use of these new tactics; the aim being only to dislodge the enemy from these advantageous positions, not occupy them themselves or continue to screen the advance or skirmish with the enemy. However, one aspect of the tactics adopted from the Prussians negated this use of the grenadiers.

When on campaign the British army joined its battalion grenadier companies together

¹⁵⁵ Humphrey Bland, pp.138–39.

into separate grenadier battalions. These could then be used as a strike force or tactical reserve, but which at the same time left the line battalions without their ability to deal with any irregulars in the manner detailed before. The only evidence of the grenadiers being used in an irregular fashion comes from the descriptions of the Battle of Warburg. Lieutenant-Colonel Beckwith stormed the heights of the Heyenberg at this battle with only twenty-four grenadiers, skirmishing with the Bourbonnais brigade where they ‘sustained their fire with a firmness worthy of admission, till such time as they were supported by the two battalions of British Grenadiers’.¹⁵⁶ These men kept up a desultory fire to impede the French progress in capturing the hill, a most important topographical feature of the battlefield, which once captured opened up the French left flank.

Having detailed the pre-war British light infantry tactics, what systems did the British adopt during the course of the West German campaign? One feature was the use of newly recruited Highland regiments, due to the successes of the 42nd, 77th, and 78th Foot (Highlanders) in America during early 1758. Two more Regiments, the 87th (Keith’s) and 88th (Campbell’s) Highlanders were formed for use in Europe in late 1759. C.T. Atkinson states that ‘their achievements under Prince Ferdinand of Brunswick and the Marquis of Granby during the Westphalian Campaigns of the Seven Years War have also a certain importance in the development of British Light Infantry’¹⁵⁷, though he does not relate how they were used in this manner during the war. The Highland military culture featured many irregular tactics, utilising the broken terrain of Scotland for guerrilla warfare in times of need. This specific skill set would be observed during the ‘small-war’ of campaign, such as their actions against Beaufremont Dragoons during the winter of 1759, where they launched a successful night attack supported by Luckners Hussars, a feature of partisan warfare La Croix

¹⁵⁶ London, British Library, ADD MS 28551 fol. 43

¹⁵⁷ C.T Atkinson, p.208.

would have strongly supported.¹⁵⁸ Their actions greatly impressed Prince Ferdinand, who pressed for an increase in their numbers.¹⁵⁹

There are only three major actions in which the Highlanders fought during the Western German campaign. Considering that for the most part of the Battle of Warburg the Highlanders were held in reserve, the Battles of Kloster-Kamp and Vellinghausen are our only case studies to assess them. With no account providing in depth information on their actions during the battles, it is hard to assess to what degree the Highlanders utilised irregular warfare as conventional light troops, especially as the only account by a regimental leader is sparse in its detail.¹⁶⁰ However many inferences can be made upon their use in this way. At Kloster-Kamp, the small detachment of Highlanders was given the task of attacking Fischer's Corps at its advanced post at the seminary of Kloster-Kamp.¹⁶¹ This action is similar to what was required of the light troops in the French literature, indicating their use in this partisan fashion. Furthermore, the Highlanders were the advance guard of the Hereditary Prince's forces, indicating that they would be thrown forward to cover the advance, a position usually given to irregular troops. At Vellinghausen the topography was even more suited to a conflict between light forces. The broken wooded terrain of the north matched with the marshy ground of the south providing excellent cover and concealment. The Highlanders were used to sustain the outposts and Hessian Chasseurs who were pushed furthest forward. In fact the lack of definitive reconnaissance from these men, resulted in conflicting intelligence about Marshal Broglie's successful flank attack. Yet their success in pushing back the *Volontaires de Saint-Victor*, possibly in a skirmishing fashion,

¹⁵⁸ Ibid, p.211.

¹⁵⁹ Sir Robert Murray Keith, *Memoirs and Correspondence*, ed. Mrs Gillespie Smyth (London: Henry Colburn, 1849) pp.101–02.

¹⁶⁰ Ibid, pp.99–107.

¹⁶¹ Fischer's Corps was a French *Compagnies Franches* which saw extensive action during the war.

matching light infantry with its equal, protected Lord Granby's exposed left flank.¹⁶²

Another clue to their ability in open-order warfare comes from Corporal Todd's *Journal*. He states that upon their outposts conflict with the French columns 'Two very Nimble Serjeants belonging the Highlanders skipped from tree to tree very near the Enemy, & fired several Shotts', mirroring the actions that the light infantry in America would have taken to combat the enemy. Unfortunately the fact that only two of the Highlanders seem to have done this is discouraging, as it does not give us enough evidence to believe that the whole unit was able to utilise these tactics. An anonymous source reported that 'His Serene Highness was then obliged to content himself with detaching the light troops in pursuit of them'.¹⁶³ Since the Highlanders were included in the troops following up the retreating French it would support the belief that they were classed as light troops. Though there is no definitive evidence for the Highlanders use in this manner, their actions at Kloster-Kamp and Vellinghausen gave the British army two regiments who could be utilised in this style.

Unlike America, where the army felt it necessary to develop its own units of light infantry, the army in Western Germany could rely on its allies. There was no desperate need to evolve as the light troops of the German armies could cover the British army's deficiencies in this area. The adoption of the *Legion Britannique* into the British army's pay allowed them to utilise these units who were accustomed to fighting in irregular warfare. At Vellinghausen the Legions two battalions supported the Highlanders in defending the extreme left flank of Lord Granby's force. The other German light troop formations were used extensively in cooperation with the British army throughout the war, such as Freytag's Jaegers at Emsdorff, or the Hessian

¹⁶² London, British Library, ADD MS 28552 fol. 23–24.

¹⁶³ Anon, *The operations of the Allied Army under the command of his Serene Highness Prince Ferdinand Duke of Brunswick and Luneberg beginning in the year 1757 and ending in the year 1762* (London: T. Jefferys, 1764) pp.215.

Chasseurs at Vellinghausen. They provided all the elements of the ‘small-war’ that the British army could not.

It is after Vellinghausen that we see the first lesson which may have been learnt from America. Fifty men from each battalion of the Foot Guards were chosen to form *chasseurs* and from these a converged battalion was formed named “Fraser’s Chasseurs”.¹⁶⁴ This system was very similar to the light infantry companies that were created in America. Considering the fact that it was only instated in late 1761 highlights an unwillingness to experiment in Germany, especially since excellent results had been observed in America during late 1759. This was ample time for which to introduce it to the West German theatre, a fact even more damning considering that the French army under Marshal Broglie were instituting these changes to their own army from late 1760 onwards, despite the fact that it was the British Army who had witnessed its excellent results in America.¹⁶⁵

Ultimately, the British light infantry in Germany was a story of limited success. With the advent of the Seven Years War, the British army had not developed to accommodate the new tactics that had spread throughout the other German nations. This left them underprepared to face the new type of irregular warfare. As such the army had to develop new formations quickly to cover the lost time, such as the creation of the Highland regiments. The use of allied light troop formations supported the British army’s weaknesses, but ultimately it was a case of limited change within the army who had not adopted the valuable lessons learnt from America until late in 1761. It is of no consequence that the eventual creation of the proper light infantry companies only came

¹⁶⁴ C.T Atkinson, p.219.

¹⁶⁵ Jean Colin, *L’Infanterie Au XVIIIe Siecle: La Tactique* (Paris: Berger-Levrault, 1907) pp.78–79; Victor-François de Broglie *L’Instruction pour l’Armee du Roi, Commandée par Mr. le Maréchal Duc de Broglie* (Frankfurt: Freres van Duren, 1760) pp.19–20.

with the reforms of 1771, thus indicating the army's unwillingness to reform even when confronted with the value of troops that had become integral to the ability to wage war.

Artillery

The British artillery in the eighteenth century was a rapidly improving force that coupled mathematical intelligence with the science of gunnery to great effect during the Seven Years War. In this Chapter I aim to evaluate the artillery's capability during the war, analysing their combat ability on the battlefields of Western Germany, and link the expanding mathematical science behind it that developed the force into one of the most effectual branches of the army on the battlefield. Military science was a whole new breeding ground for intellectual thought during the eighteenth century; along with advances in geometry, calculus and physics the mathematicians of Britain were beginning to make a name for themselves in the discoveries on ballistics, such as the work *New Principles of Gunnery* by Benjamin Robins.¹⁶⁶ This work dealt with the problems of ballistics velocity and the effect of air resistance on bodies in flight and was influential enough to gain Leonhard Euler's attention in Prussia. Brett Steele's work describes the theoretical literature that pushed forward the investigation into ballistics during this period,¹⁶⁷ while Niccolo Guicciardini builds upon this in his work *The development of Newtonian Calculus in Britain*,¹⁶⁸ where sections deal with how advances in theoretical mathematics were introduced into educating the military. This chapter aims to develop this further, moving away from a purely mathematical standpoint and instead investigating how the Royal Military Academy Woolwich tied all this knowledge together into educating the cadets and preparing them for a service in the artillery.

¹⁶⁶ Benjamin Robins, *New Principles of Gunnery* (London: J. Nourse, 1742).

¹⁶⁷ Brett D. Steele, 'Muskets and Pendulums: Benjamin Robins, Leonhard Euler, and the Ballistics Revolution', *Technology and Culture*, vol. 35 no. 2 (1994) 348-382.

¹⁶⁸ Niccolo Guicciardini, *The Development of Newtonian Calculus in Britain 1700-1800* (Cambridge: Cambridge University Press, 1989).

The general perception of artillery in the eighteenth century was that it was not the dominant battle winning force of later centuries. Technology had not advanced far enough to allow the indirect fire and extreme ranges that became the common features of modern warfare. However, the destructive capacity of artillery at the time should not be underestimated, nor its ability to effect the outcome of a battle. As Richard Holmes states ‘a battery firing canister at 600 yards had the same effect on its target as a battalion firing volleys at 100 yards,’¹⁶⁹ something that would be demonstrated during the important battle of Minden. The weapon that would be integral in Napoleonic warfare was no-less important during the Seven Years War. Baron Jomini perfectly sums up the considerable effect artillery had on the battlefield:

Artillery is an arm equally formidable both in the offensive and defensive. As an offensive means, a great battery well managed may break an enemy’s line, throw it into confusion, and prepare the way for the troops that are to make an assault. As a defensive means, it doubles the strength of a position, not only on account of the material injury it inflicts upon the enemy while at a distance, and the consequent moral effect upon his troops, but also by greatly increasing the peril of approaching near, and specifically within the range of grape.¹⁷⁰

Prior to its achievements in the Revolutionary and Napoleonic Wars, the notable effect artillery had on the battlefield during the period of *ancien regime* warfare has been understated by historical literature. The lack of study stems from the dearth of first-hand accounts, as well as the limited reports on the artillery from the commanders, thereby stunting greater discussion. This forces the historian to utilise less accessible forms of sources to critically analyse the artillery. The vast and complex records of the Board of

¹⁶⁹ Richard Holmes, *Redcoat* (London: Harper Collins, 2002) p.241.

¹⁷⁰ Antoine-Henri Jomini, *The Art of War*, trans. Capt. G.H. Mendell (Philadelphia: J.B. Lippincott, 1862) p.315.

Ordnance make it time consuming to cover, thus the limited study undertaken here could not hope to sufficiently address these records to achieve a full analysis.

The Royal Regiment of Artillery was formed in 1716, yet the artillery in the first half of the eighteenth century was considerably different compared to the artillery of the Seven Years War. To compare the audacity and efficiency displayed by the Royal Regiment of Artillery in the Seven Years war to its forbears of only half a century before paints a dramatically different picture. The artillery had undergone very little improvement since the time of King Henry VIII,¹⁷¹ in fact though a regiment had been formed in 1697, artillery in the first half of the eighteenth century was still formed along the same lines as that Tudor Monarch.¹⁷² When a campaign began the Board of Ordnance would organise special trains.¹⁷³ These trains would constitute the guns, staff, and men brought together from around the varying fortresses of Britain to use on campaign. Usually this was a slow process and involved little uniformity, which resulted in poor organisation.

Prior to the Regiments formation, the artillery had fought during the War of the Spanish Succession, from 1701–14. The artillery's composition and utilisation varied considerably from its later incarnation during the Seven Years War. The guns were cumbersome weapons similar to those used in the Seventeenth Century. The field guns were pulled into position on the battlefield by teams of up to eight to ten horses, needed due to their extreme weight of up to three tonnes.¹⁷⁴ Chandler perfectly sums up another significant disadvantage in that:

¹⁷¹ Henry VIII, King of England (1491–1547).

¹⁷² Robert Wilkinson Latham, *British Artillery on land and Sea* (Newton Abbot: David & Charles, 1973) p.7.

¹⁷³ *Ibid.*, p.7.

¹⁷⁴ David Chandler, *Marlborough as Military Commander* (London: Batsford, 1973) p.73.

Most draught horses and their drivers were provided on short-term contracts by civilian contractors. Most of these were local, often operating on a two-day march which caused endless problems of replacement [...] the civilian drivers proved most unwilling to court a glorious death for their temporary employers, and often deserted their cumbersome charges and fled at the first hint of action.¹⁷⁵

Due to these civilian problems, as well as the weight of the guns, the weapons would rarely be repositioned on the battlefield. However, exceptions can be found throughout the war, such as the use of light two-pounder cannons by the Dutch Colonel Wertmuller. His aggressive use of these guns allowed him to capture the villages of Franquenay and Tavieres during the Battle of Ramillies, a most consequential period of the battle.¹⁷⁶ Equally, the offensive actions of the French Artillery commander the Marquis de St Hilaire, who was an exponent of moving his pieces around the battlefield to threatened areas, such as his devastating use of them at the Battle of Malplaquet¹⁷⁷. Colonel de la Colonie describes how St Hilaire dealt with the advance of the Allied infantry:

As soon as this dense column appeared in the avenue, fourteen guns were promptly brought up in front of our brigade almost in line with the regiment of Garde Francaise. The fire of this battery was terrific, and hardly a shot missed its mark. I could not help noticing the officer in command, who although he seemed elderly was nevertheless so active that in giving his orders there was no cessation of actions anywhere.¹⁷⁸

The medieval names attributed to the guns had only just begun to be dispensed with; terms such as Sakers and Culverins were phased out in favour of the nomenclature of categorising them via the weight of the shot used. The British Artillery utilised light

¹⁷⁵ Ibid, p.73.

¹⁷⁶ For a relation of the Battle of Ramillies see: David Chandler, pp.172–78.

¹⁷⁷ For a relation of the Battle of Malplaquet see: David Chandler, pp.254–66.

¹⁷⁸ Jean-Martin de la Colonie, *The Chronicles of an Old Campaigner: M. de la Colonie, 1692–1717* (John Murray, 1904) p.338.

one-pounder and three-pounder guns for use with the individual battalions, known as battalion guns. The main field artillery comprised six-pounder, nine-pounder and sixteen-pounder's lined up across the battlefield. The British artillery trains rarely used heavier guns than the sixteen-pounder on the battlefield, though Marlborough utilised some twenty-four pounders at Ramillies. However, we should not paint a completely undesirable picture of the British artillery in the War of the Spanish Succession, given that Marlborough was ably served by his artillerymen, including its outstanding commander Holcroft Blood.¹⁷⁹

The artillery acted similarly in the War of the Austrian Succession 1740–48 though the Royal Regiment was now composed of more Englishmen, not relying on European gunners as before. The guns still retained many of their previous features, such as their lack of mobility and organisation. Civilians were still contracted to pull the guns with their own horses, resulting in the usual mobility problems, as the civilians would leave the battlefield once the engagement began to protect their horses. Consequently, if a battle was lost, such as at the Battle of Fontenoy, the guns would be lost to the enemy as they could no longer be towed off the battlefield. The lack of respect held for the British artillery by the French is best illustrated in Browne's work *England's Artillerymen*. It relates of a pantomime played within the French Winter quarters, whereby the clown mocks an English officer for being unprepared for war.¹⁸⁰

How then did the artillery become such an influential force during the Seven Years War? A chief component was due to the work achieved at the Royal Military Academy at Woolwich. This academy was set up in 1741, by a royal warrant of King George II. It was created to instruct the 'raw and inexperienced people belonging to the

¹⁷⁹ David Chandler, pp.71, 74.

¹⁸⁰ James Alexander Browne, *England's Artillerymen: An Historical Narrative of the Services of the Royal Artillery, from the formation of the Regiment to the amalgamation of the Royal and Indian Artilleries in 1862* (London: Hall, Smart and Allen, 1865) p.12.

Military branch of this office, in the several parts of Mathematics necessary to qualify them for the service of the Artillery'.¹⁸¹ These raw and inexperienced people were the officers, non-commissioned officers and the cadets who would be taught at the Academy via lectures and practical experience. This all indicates that the artillery needed to go through some form of transformation. The Board of Ordnance understood the need for a repository of information, which could then be taught to any young gentlemen who would enlist. This system would provide the structure and training necessary for the corps of artillery to improve. This structured environment provided a focal point to impart knowledge on the burgeoning military science revolution to its cadets, focusing on the mathematics of fortification and on the ballistics revolution dealing with cannonball velocities and air resistance. This allowed the British state to marshal its intellectual prowess into improving its armed forces, by staffing the artillery with cadets who had been imparted with this knowledge. Due to this, Steele notes that it had become increasingly valuable for European governments to invest in providing academies for the more scientific branches of its armies, e.g. the artillery and engineers.¹⁸²

The cadets taught at the academy were admitted upon acceptance by the Master-General of the Ordnance and aged between ten and thirty.¹⁸³ The education was based upon three days of lectures in mathematics followed by three days of practice.¹⁸⁴ At the Academy's inception, there were only six staff members; two mathematicians, a French language master, a drawing master and two model makers. These were led by the Chief Master, who was Professor of Artillery and Fortification, a man named John Muller. A

¹⁸¹ F.G. Guggisberg, *The Shop: the story of the Royal Military Academy* (London: Cassell and Company, 1900) pp.1–2.

¹⁸² Brett D. Steele, p.350.

¹⁸³ F.G. Guggisberg, p.4.

¹⁸⁴ Anon, *Rules and Orders for the Royal Academy at Woolwich* (London: J. Peele and W. Wilkins, 1741) pp.5–8.

German, he had been labelled as ‘the scholastic father of all the great engineers which this country has employed for forty years’.¹⁸⁵ The lectures covered the mathematics of the time, including: algebra, geometry, plane trigonometry and conic sections to name a few.¹⁸⁶ This mathematical basis was then applied to the use of the artillery, matching up with the artillery sciences of ballistics, ranges, elevations and projectiles. All this education would provide them with the ability to solve mathematical problems pertaining to their working careers in the artillery.

John Muller was initially supported by another Master, a Mr Derham, though upon his death in 1743, he was replaced by Thomas Simpson, a self-taught mathematician who had written extensively, his notable works being the *Elements of Geometry* and *Doctrine and Application of Fluxions*.¹⁸⁷ Muller was heavily influenced by Benjamin Robins, a Royal Society fellow, whose work *New Principles of Gunnery*, written in 1742, instituted the ballistics revolution, and was influential enough for Frederick II King of Prussia to request Leonhard Euler to provide a translation that could be used to train his own artillery.¹⁸⁸ Charles Hutton, a later notable professor at the Academy, wrote that Robins’ work was:

The first work that can be considered as attempting to establish a practical system of gunnery, and projectiles, on good experiments, on the force of gunpowder, on the resistance of the air, and on the effects of different pieces of artillery.¹⁸⁹

Muller’s work *A Treatise of Artillery*, built upon this, giving his commentary upon Robins and Vauban and including what he had discovered in this emerging military

¹⁸⁵ E.G.R Taylor, *Mathematical Practitioners of Hanoverian England* (London: Cambridge University Press, 1966) p.188.

¹⁸⁶ Niccolo Guicciardini, p.110.

¹⁸⁷ Thomas Simpson, *Elements of Geometry*, vol.2 (London: J. Nourse, 1760); Thomas Simpson, *Doctrine and Application of Fluxions* (London: J. Nourse, 1750).

¹⁸⁸ Leonhard Euler, the eminent eighteenth-century mathematician, had been newly instituted as Professor at the Berlin Academy of Sciences.

¹⁸⁹ Brett D. Steele, p.349.

science.¹⁹⁰ This work was important enough to later be used by the Continental army to train their artillery during the American War for Independence.¹⁹¹

The theory taught at the Academy was supplemented by practical training. When the three days of theory lectures were completed, three days of practical experience were taught by the senior officers and masters. This was taught to all the men at the Academy, the cadets as well as the men in the Regiment. The practice would take many forms; training was conducted in ‘the manner of serving and firing all sorts of pieces of artillery’¹⁹² as well as learning the ‘proper charges of the different pieces, according to the several services in which they may be employed’.¹⁹³ The men would run through the motions for the laying, loading and firing of the guns. As Muller writes:

When the piece has been fired, it is sponged, to clear it from any dust or sparks of fire that might remain in it, and loaded: then the centre line is found, as before; and if the shot went too high or too low, the elevation is altered accordingly.¹⁹⁴

This constant repetitive weapons training would instil a habitual experience, which they would instinctively fall back on in the heat of combat.

Not only was form drilled into the men but accuracy was also paramount. The men were ‘exercised in the hitting of marks, whether point blank, or at any degree of elevation.’¹⁹⁵ This was achieved through two measures. First, by finding the centre line of the gun, using an instrument called a perpendicular. The centre line was found between two points, one at the breech and the other at the muzzle, which were then marked with chalk. This was used to aim the cannon towards the enemy. The second

¹⁹⁰ John Muller, *A Treatise of Artillery* (London: J. Millan, 1757); W. Allingham, *A New Method of Fortification, as practised by Monsieur de Vauban Engineer-General of France* (London: A. Bettesworth, 1722)

¹⁹¹ John Muller, *Treatise of Artillery* (Philadelphia: Styner and Cist, 1779) See the dedication from John Norman providing John Mullers book to the artillery officers of the continental army.

¹⁹² Anon, *Rules and Orders for the Royal Academy at Woolwich*, p.9.

¹⁹³ *Ibid*, p.13.

¹⁹⁴ John Muller, *A Treatise of Artillery* (London: J. Millan, 1757) pp.229–30.

¹⁹⁵ Anon, *Rules and Orders for the Royal Academy at Woolwich*, p.9.

measure was achieved through adjusting the elevation to find the range. Muller indicates that ‘a quadrant is introduced into the mouth, in order to give it a proper elevation, which at first is guessed at, according to the distance the target is from the piece’.¹⁹⁶ His insight suggests that though the mathematical science of ranges had come far, a degree of experience through training was still necessary, as only this would give them the proper understanding of which size quadrant to utilise. The lessons on trajectories and ranges would transition over into the first-hand practice of accuracy in the field. The training was conducted with the intention of instilling preparation for war. The *Rules and Orders* state that the cadets were ‘directed to perform with the same care and precautions as are used in real war.’¹⁹⁷ This training was all conducted with a view to then evaluate the cadets and place them in classes. The first consisted of the best cadets; the second class those who had become good at their work, and the last class made up of those undesirable for the service. This grading system not only pushed the cadets on competitively to achieve higher levels of success, but also introduced a level of competency within the artillery as those who were unsuitable would not be accepted into the force.

Education was not the only thing important to come out of the Academy. The experimentation conducted there upon the guns would be crucial to the success of the Seven Years War. Building upon the prototypes brought across from Europe by Colonel Weideman and Baron Stark, the Academy along with the Board of Ordnance experimented on ways to make the six-pounder lighter and shorter.¹⁹⁸ This was influenced by the preliminary investigations of Benjamin Robins, especially his Maxim XIV in his *New Principles of Gunnery*, which stated that:

¹⁹⁶ John Muller, p.229.

¹⁹⁷ Anon, *Rules and Orders for the Royal Academy at Woolwich*, p.9.

¹⁹⁸ John Muller, pp.9–11.

If two pieces of cannon of the same bore, but of different lengths, are successively fired at the same elevation with the same charge of powder; then it will frequently happen, that some of the ranges with the shorter piece will exceed some of those with the longer.¹⁹⁹

Through further investigations conducted by John Muller which corroborated Robins' findings, the army created the short six-pounder cannon, which was lighter but still retained the relative ranges of the larger six-pounder pieces. The short six-pounder would subsequently have a profound influence on the artillery's success during the war.

Promotion in the artillery at the time was through seniority. Unlike the cavalry and infantry, promotion through the ranks of the artillery was gained through a vacancy in the position, as the purchase of commissions was not allowed. Promotion was strictly through seniority, usually obtained on the death of a senior officer, which usually made advancement in the profession slow.²⁰⁰ Despite the limitations for advancement in this system, it enabled the artillery to be staffed with officers who understood their profession, and thanks to the work at the academy the officers were generally well trained and adept at their job. The inability to purchase commissions ensured that unskilled officers could not obtain positions of high rank within the artillery, unlike the infantry and cavalry. One feature of the artillery in the Seven Years War is directly attributable to the seniority system. We observe men of low rank holding positions of high power within the artillery on campaign. Many of the officers who held commands during the West German campaign were only captains, such as William Phillips the British artillery commander. This was caused by their inability to reach higher ranks

¹⁹⁹ Benjamin Robins, *New Principles of Gunnery* (London: J. Nourse, 1742) p.261.

²⁰⁰ Robert P. Davis, *Where a Man Can Go: Major General William Phillips, British Royal Artillery, 1731-1781* (London: Greenwood Press, 1999) p.14.

due to the seniority system, yet the army had placed these men in positions of power due their ability.

This faith in their ability may be due to the knowledge that many of the officers who commanded the brigades on campaign were previously cadets at the Academy, as the table in Appendix 1 shows.²⁰¹ Captain Phillips began his career as a cadet gunner in 1746, rising through the ranks in the 1750's to reach his captaincy in May 1756. Equally, Phillips' brigade commanders, Forbes Macbean, Duncan Drummond, and Edward Foy all started off as cadets in the 1740's and 50's rising to the rank of Captain or Captain-Lieutenant. This indicates the faith placed in the Officers who had come from the Academy, as though there were more senior officers in the artillery, these men were chosen to lead the artillery in Europe. The brigade commanders were equally supported by Lieutenants who had also come from the Academy. 2nd Lieutenants John Carden, Robert Rogers, and Vaughan Lloyd had all been at the Academy during 1755/6. These men were all rapidly promoted to 2nd Lieutenant in early 1759 and given positions within the army that was in Germany.

Upon the artillery's arrival with the first waves of British troops, the Allied army had already fought in the Battle of Bergen 13 April 1759.²⁰² Though the battle featured no British troops it is still noteworthy for the severe lack of artillery within Prince Ferdinand's army. His multiple attacks upon Bergen were regularly repulsed due to the actions of the more numerous French artillery. This showed to Prince Ferdinand the merits of having a strong supporting arm of artillery. Frederick the Great consequently suggested to Ferdinand that he 'should seriously consider [increasing] your heavy guns. In this accursed war it is impossible to succeed without having many of them'.²⁰³ The

²⁰¹ See Appendix 1, p.93.

²⁰² For a relation of the Battle of Bergen see: Sir Reginald Savory, *His Britannic Majesty's Army in Germany During the Seven Years War* (Clarendon Press, 1966) pp.128–33.

²⁰³ *Ibid*, p.134.

British artillery's arrival then was at a crucial moment and a welcome addition to the Allied army.

The artillery's potent use as an offensive weapon was displayed multiple times during the war. It was first demonstrated at the Battle of Minden 1 August 1759.²⁰⁴ Much has been written on this battle, especially on the famous infantry advance as well as the cavalry's inactivity, though less focus has been given to the artillery. This offensive capacity was displayed during the deployment of the light artillery brigades at the windmill at Hahlen. This indicated the willingness by Prince Ferdinand to group his artillery brigades together in a large battery which could dominate the field. The light brigades of artillery, composed each of nine short six-pounder cannons, were led by the Academy graduates Captains Foy and Macbean. At the critical juncture of the battle, during the British infantry advance, the artillery brigades were important in holding the left of the line. Prince Ferdinand in his dispatches wrote 'H.S.H immediately caused Capt Foye's brigade to advance, and posted them near the Windmill of Hahlen, with orders to fire without intermission which they did with great success.'²⁰⁵ This indicates the industrious use of the guns to throw back the galling fire from the French artillery, as well as providing supporting fire when faced with the French infantry counterattack.

Fortescue describes how 'Observing the excellent practice of Foy's battery before Hahlen, Ferdinand had already sent Macbean's British battery to join it and ordered Haase's Hanoverian brigade of heavy guns to the same position'²⁰⁶ to form a large battery where they 'played with great success'²⁰⁷ against the left wing of the French army. This artillery tactic would not become famous till much later, through Napoleon Bonaparte's innovative use. He utilised his artillery extensively in massed

²⁰⁴ For a relation of the Battle of Minden see: Stuart Reid, *The Battle of Minden 1759: The Miraculous Victory of the Seven Years War* (Barnsley: Frontline Books, 2016) pp.93–112.

²⁰⁵ London, National Archives Kew, W/O 72/12 fol.3.

²⁰⁶ J.W. Fortescue, *A History of the British Army*, vol. 2 (London: Macmillan and Co., 1899) p.491.

²⁰⁷ W/O 72/12 fol.3.

batteries to create weak points within the enemies force from which to push through with a combined arms attack.²⁰⁸ Prince Ferdinand's massed battery at Hahlen was similar to Napoleons approach to tactics.²⁰⁹ The battery knocked out the French left wing artillery, blasted holes through the French cavalry as well as countering the parry of the French and Saxon infantry brigades.²¹⁰ When combined with the famed infantry attack, it ultimately facilitated the general advance against the centre of the French army.

The other notable feature of the artillery was its mobility. It displayed this both at Minden and Warburg. The speed with which the British artillery followed up the retreating French at Minden, compensated for the failure of the British cavalry to follow up the advance. This was an age where guns were usually hard to manoeuvre; the aptitude to fluidly limber up the guns and then move over the rough ground indicates their previous training in the movement of the artillery. This is where the lighter short-six pounder gun would have been influential, its manoeuvrability being key in following up the retreating French. Despite the continued use of civilian drivers (though these men were now tied to longer contracts) and that many of the men were dismounted, the fluidity of the artillery brigades are noteworthy.²¹¹ The men were able to quickly calculate the ranges to the enemy and expertly service their weapons to exact the highest casualties. This brings us back to the training done at the Royal Military Academy. The exercise in the 'hitting of marks... at any degree of elevation'²¹² would have embedded a professionalism in the men to achieve the same standard whilst in battle. When you

²⁰⁸ See especially Napoleons use of his guns at the Battle of Eylau, Wagram and Ligny. All featured massed batteries from which a hole could be punched in the enemies force to win the battle.

²⁰⁹ This massed battery was formed from the eighteen light guns under Foy and Drummond, the ten British medium twelve pounders and twenty-two Hanoverian guns under Major Haase. See order of battle in Stuart Reid, pp.117–129.

²¹⁰ W/O 72/12.

²¹¹ The civilian aspect still caused the artillery problems such as the loss of eighteen guns at the battle of Corbach owing 'to the artillery horses taking fright & running off with the limbers- perhaps their Drivers were more to be blamed.' Related in London, British Library, ADD MS 28551 fol. 21.

²¹² Anon, *Rules and Orders for the Royal Academy at Woolwich*, p.9.

take into account they did this multiple times, redeploying constantly while following up the enemy it is a thing to be admired.²¹³

This mobility was improved upon at the Battle of Warburg.²¹⁴ The artillery were thrown into a tricky situation when ordered to support the cavalry's advance over five miles of rough ground. As Davis describes Phillips 'ordered his guns into the most unprecedented manoeuvre in British Artillery history'.²¹⁵ During the cavalry's rapid advance towards the French lines, the artillery were able to keep pace with them. The British artillery brigade was part of the column commanded by Wilhelm Count of Schaumburg-Lippe-Buckeburg,²¹⁶ the allied artillery commander during the Western German Campaign.²¹⁷ Prince Ferdinand put great faith in his abilities, with his understanding of artillery warfare crucial to the success of the Allied army, Ferdinand stating that 'all Orders relating to the Artillery depended upon him'.²¹⁸ He may have influenced the success of the advance, as he would later indicate his ability in manoeuvring artillery over distances on difficult terrain at the battle of Vellinghausen.²¹⁹ The extraordinary feat at Warburg was praised by commanders on both sides, especially since the heavy twelve-pounders maintained the same pace. An anonymous source reports that:

Captain Phillips also brought up the English artillery on a gallop, and seconded the attack in a surprising manner, having, by a very severe cannonade obliged those who

²¹³ See Captain Macbean's comments at Lord George Sackville's trial: Stuart Reid, pp.178–79.

²¹⁴ For Battle of Warburg see: Sir Reginald Savory, pp.234–39.

²¹⁵ Robert P. Davis, p.25.

²¹⁶ Wilhelm Count of Schaumburg-Lippe-Buckeburg 1724–1777, Allied artillery commander In Germany, he later led the defence of Portugal in 1762 against Spain.

²¹⁷ ADD MS 28551 fol. 40.

²¹⁸ W/O 72/12.

²¹⁹ London, British Library, Add MS 28552 fol. 24.

had passed the Dymel, and were formed on the other side, to retire with the greatest precipitation.²²⁰

However during the action, Captain Phillips knew his corps were up to the task. His extensive training at the Academy, combined with the experience gained in the field would have informed his decision. He must have known the component parts of the guns would be able to handle the stress of the speed and distance, otherwise he would not have given the order. By extracting all the mobility he could get out of his guns, he came upon the French flank at a crucial moment. The men once again displayed their experience and training in quickly providing fire support to the cavalry. Once the cavalry had been defeated, they switched their target upon the French infantry, and then followed up their retreat, similar to the action at Minden.

Mention must be made of the men's fitness. In both battles described they went through severe exertion in their duty. Having spent a considerable portion of the day at Minden engaged, the men had to constantly service their guns to maintain the centre-right of the line. This would involve all the labour of loading, aiming and firing the gun, but also pushing it back into position once the recoil had blown it backwards. Despite the alterations, these pieces were still heavy and would have exacted a physical toll on the men. To keep up such an unrelenting level of fire is a testament to their fitness. At Warburg they ran over five miles beside their guns, after which they then engaged the enemy, highlighting their endurance, which may have come about due to the practical training conducted at the academy, or through the general improvement born of constant training while on campaign.

²²⁰ Anon, *The operations of the Allied Army under the command of his Serene Highness Prince Ferdinand Duke of Brunswick and Luneberg beginning in the year 1757 and ending in the year 1762* (T. Jefferys, Geographer to the King, 1764) p.161.

The later battle of Kloster-Kamp, 16 October 1760, provides limited sources on the conduct of the artillery, possibly due to the lack of a large artillery presence at the battle, which could have been the deciding factor in the defeat of the Allied army. We see at Minden and Warburg that the artillery provided the punch to break through the enemy lines; however since the Hereditary Prince of Brunswick did not have a considerable force of heavy guns at Kloster-Kamp he could not use them in an offensive capacity. This resulted in a protracted Infantry engagement which eventually created a deadlock. The importance of artillery cannot be understated, reminding us of Frederick the Great's earlier comments. An anonymous source suggests that artillery were present at the battle, whereby it states that one gun was lost to bursting,²²¹ yet I have not discovered any further extensive reports and so can only surmise upon the battle.

The artillery came to the fore once again at the Battle of Vellinghausen.²²² This battle will be discussed in more detail in the final chapter, so I will only briefly sketch in some of the actions of the artillery. All the values of the artillery were on display at this engagement, the rapid movement of the guns over to the left flank to counter Marshal Broglie's attack, as well as the destructive capability of the guns firing from the natural elevation of the Dinckerberg, which dominated the area. Unlike Ferdinand's earlier battles at Minden and Warburg, Vellinghausen was a defensive engagement. As such it would negate the offensive capabilities of the artillery shown during those two earlier battles. This may be a reason as to why there was a lack of commentary on the artillery in the senior commanders accounts of the battle compared to Minden. However, an anonymous journal gives us incredible insight into the actions of the battle,

²²¹ Ibid, p.179.

²²² For a relation of the Battle of Vellinghausen see: Sir Reginald Savory, pp.320-25.

especially the artillery's importance in throwing back the French assaults on the village of Vellinghausen.²²³

Ultimately the artillery during the Seven Years War witnessed a significant increase in success compared to the previous wars of the Spanish and Austrian Successions. The development of a scientific understanding of ballistics, which was coupled with the mathematical and practical education undertaken at the Royal Military Academy furnished the artillery with officers who understood how to utilise their weapons to the fullest. When coupled with experience through repeated engagements and the earlier introduction of improved weaponry, this culminated in the dominance of the British artillery, which was an important factor in the performance of the Allied army.

²²³ ADD MS 28552 fol. 25.

The Battle of Vellinghausen

One rule we frequently observe in warfare is the general improvement of an army's skill the longer it consistently engages in campaigns. So long as the army was not repeatedly crippled by losses, the soldiers became more veteran at conducting themselves and divisions of control such as brigades became better at coordinating tactics. By using the Battle of Vellinghausen as a case study, this chapter will discover whether the British Army improved its performance throughout the war, thus answering the main emphasis of this study. Utilising the previous chapters as a benchmark for what changes were inducted into the several branches of the army, we can utilise a holistic analysis to investigate how the army improved as a whole. When we investigate the improvements upon an army, we observe three categories that these improvements fall under: training/experience while on campaign, new technology, and new tactics/doctrine introduced. Were these improvements undertaken through innovation, or assumed to provide counter-measures to elements in the enemy or even allied forces? This analysis will be undertaken by scrutinising the accounts of the battle to give us a glimpse of the fighting style of the British army during the Battle of Vellinghausen, the last major battle of the Western German theatre of operations. The accounts are limited, but provide us with a good cross-section of resources. We gain a tactical understanding from the general field officers accounts, such as Ferdinand's report to King George II, or Lord Granby's account to Lord Bute;²²⁴ whereas a more personal narrative is provided by the private soldiers accounts, such as those of Corporal Todd and John Tory.²²⁵ Non-English viewpoints are provided by the Hanoverian General August

²²⁴ London, National Archives Kew, SP 87/40 fol. 202–04; London, National Archives Kew, SP87/41 fol. 109–11.

²²⁵ William Todd, *The Journal of Corporal Todd, 1745–62* ed. by Andrew Cormack and Alan Jones (Thrupp: Sutton Publishing, 2001); Reginald Savory, 'John Tory's Journal, 1758-1762', *Journal of the Society for Army Historical Research*, vol.54 no. 218 (1976) 70-95.

Friedrich von Sporcken as well as the opposition's account provided by one of the French commanders, Victor-François 2nd Duc de Broglie in his letter to Prince Xavier, or another of his as well as Charles, Prince of Soubise's accounts displayed in the *Aberdeen Magazine*.²²⁶ The well-known anonymous journal of the operations of the Allied Army provides further scope, though another anonymous Journal of the war found in the additional manuscripts at the British Library is a more valuable source, as it provides extensive in-depth detail of the events of the battle which has not been previously utilised.²²⁷

Before a qualitative analysis can be undertaken, a summary of the battle must be delivered to acquaint the reader with events, so that one will have a better grasp of the subject matter to which the improvements may be attributed. The Battle of Vellinghausen was fought on the 15/16 July 1761 and its importance cannot be overstated not only in its strategic sense, but for our tactical analysis. As C.T. Atkinson states:

If it lacks the dramatic elements which distinguish Minden and Warburg and was not followed up by any strategical counter-stroke, it was in its way as decisive as any mere defensive action fought against considerable superiority of numbers could possibly be.²²⁸

The French aim was very simple, by joining their two large armies together they planned to use their weight of numbers to force Ferdinand to give up Lippstadt, a vital position on the defensive line into Westphalia and his supplies back in Emden. This

²²⁶ London, British Library, ADD MS 38197 Folio 234–37 ; Victor-François, Duc de Broglie *Correspondance inédite de Victor-François Duc de Broglie Maréchal de France avec le Prince Xavier de Saxe, Comte de Lusace Tome IV* (Paris : Albin Michel, 1903) pp.117–20; Anon, *The Aberdeen Magazine for the year 1761* (Aberdeen: Francis Douglas, 1761) pp.391–94.

²²⁷ Anon, *The operations of the Allied Army under the command of his Serene Highness Prince Ferdinand Duke of Brunswick and Luneberg beginning in the year 1757 and ending in the year 1762* (London: T. Jefferys, 1764); London, British Library, ADD MS 28551, London; British Library, ADD MS 28552.

²²⁸ C.T Atkinson, 'Highlanders in Westphalia, 1760–62: and the Development of Light Infantry', *Journal of the Society for Army Historical Research*, Vol. 20 No.40, (1941), 208–223, (p.218).

operation was very similar to how Ferdinand had been driven out of Hesse during the Warburg campaign. However, Ferdinand was confident in his army's ability in combat, given the many victories he had achieved, and so chose to defend Lippstadt. Prince Ferdinand manoeuvred into a defensive position near the town of Ham, the name of Vellinghausen being taken from the little village occupied on the Allied Army's left flank. The Allied Army's inferiority in numbers (60,000 men as opposed to 100,000) indicated that Ferdinand had complete belief in his army's ability. This was coupled with his understanding of the topographical strength of his position, whereby a marshy stream ran along his front, with the Dinckerberg hill dominating his left flank. After initial skirmishing through the days of the 13/15 July, Broglie having utilised the close ground surrounding Oestlinghausen, a village near Vellinghausen, advanced with his army in three columns upon the unprepared General the Marquis of Granby, who commanded a division on the extreme left wing. The French light infantry pushed back the British left wing, forcing Lord Granby to front his division obliquely towards the river Lippe to protect his flank. The *Legion Britannique* and the Highlanders supported by the 15th Light Dragoons were able to force back the French light infantry, shoring up Lord Granby's left flank. As Prince Ferdinand became aware of Marshal Broglie's attack, he shifted his army left to support Lord Granby, leaving Charles William Ferdinand, the Hereditary Prince of Brunswick to watch the motions of the second French army under Prince Soubise. Through the rest of the evening the French forces under Marshal Broglie launched multiple attacks upon Lord Granby's forces to no avail. The night of the 15 July saw constant skirmishing between the outposts of each army, which led onto another major attack early on the 16 July. General Heinrich Wilhelm von Wutginau who had supported Lord Granby's left flank began to push back the French forces in his sector, who perceiving they were vastly outnumbered began a general

retreat.²²⁹ This was followed up by the English grenadiers attack on Marshal Broglie's forces, which resulted in a large number of prisoners. Prince Soubise who had spent most of the first day vacillating, launched a few half-hearted attacks upon Prince Ferdinand's front, though the determined defence of the stream crossings dissuaded any major effort, and Soubise eventually withdrew with Marshal Broglie.

Throughout the battle we see evidence of the improvements that had begun to pervade the British army, which can be collated into three types. The first type of improvement witnessed is that which is gained through extensive training and the accumulation of combat experience. This would have only been obtained by veteran regiments used to the many campaigns and battles they had fought in. By the time of the battle of Vellinghausen, two-and-a-half years had passed since many of the regiments had arrived in Germany in the summer of 1758. Due to this, many of them had gained extensive experience in the plethora of battles fought. Though more extensive research will need to be undertaken to discover whether there was a core of experienced officers and NCO's that served throughout this period of time, the records of the *Court and City Kalendar* show that the upper echelons of command in the regiments, the Lieutenant-Colonels and Majors, continued their service in the regiments which campaigned in Germany; officers such as Major William Eustace of the 5th Foot (Hodgson's) or Lieutenant Colonel Edward Pole of the 23rd Welsh Fusiliers served in Germany from 1758-1763.²³⁰ Therefore these men would continue to grow in experience as they led the regiment in combat and undertook the training on field-days, with that experience filtering down into the officers below them. As Houlding argues, the general pattern of the British Army while on a campaign was one of 'initial inadequacy, followed by

²²⁹ Anon, *The Aberdeen Magazine for the year 1761*, p.392, here we see Marshal Broglie's loss of composure as the numbers were rather relatively equal.

²³⁰ Anon, *The Court and City Kalendar; or Gentleman's register* (London: J. Fuller, 1758) p.147-54, See the several editions, printed each year which indicate the changes in command for the regiments.

endless and intensive practice, imposed upon the regiments by the shortcomings of peacetime training.²³¹ This inadequacy of training in peacetime was due to the lack of substantial training in battlefield capability, such as regular training on firing and manoeuvre. These factors were only addressed while on campaign, and in fact it appears were regularly attended to by all the regiments.²³² This training was conducted by individual regiments through participating in ‘field-days’ or by practicing ‘firings’. It was only conducted while on campaign but was a regular feature, as the Military order books for 1758-1759 show.²³³ A few sections of the Order books will suffice to indicate the regularity of this training:

25 March 1759: Stuart’s will have a field day.²³⁴

4 April 1759: Kingsley’s have a field day to-morrow.²³⁵

9 April 1759: Lord George Sackville has ordered three barrels of powder to be brought to town for each battalion, each regiment is to keep 18 rounds per man and the best (?) powder, and may make use of the remainder to practise firings. The Welsh Fusiliers have a field day to-morrow.²³⁶

16 April: Napier’s a field day to-morrow.²³⁷

26 April 1759: Fusiliers and Stuart’s a field day to-morrow.²³⁸

The regular training of the regiments would have been conducted with the aim of maintaining a high level of ability within the ranks, so that the regiments would be combat ready whenever a situation arose. Training in the basics was essential but

²³¹ J.A. Houlding, *Fit for Service: The Training of the British Army, 1715–1795* (Oxford: Clarendon Press, 1981) p.368.

²³² *Ibid.*, pp.362–63.

²³³ The Hon. Frederick Lindley Wood, M.L.S. Clements, S. Phillip Unwin, *Historical Manuscripts Commission, Report of Manuscripts*, vol. VIII (Hereford: The Hereford Times Ltd, 1913) pp.418–568.

²³⁴ *Ibid.*, p.555.

²³⁵ *Ibid.*, p.559.

²³⁶ *Ibid.*, p.561.

²³⁷ *Ibid.*, p.564.

²³⁸ *Ibid.*, p.566.

brigade level tactics would also have to be practiced, something the British army did not prepare when not on campaign. Houlding argues that though the general basics of the parade ground manoeuvre as well as the manual exercise and platoon firings were regularly practised, regiments went to war poorly prepared in conducting brigade level tactics, something that would have to be rectified through experience on campaign.²³⁹ The pivot manoeuvre conducted by Lord Granby at Vellinghausen indicates that the Army became successful in conducting these brigade size manoeuvres by the later period of the war. A Journal describes how:

The Enemy by advancing along the Ham road and obliging the Light Troops to give way had already in a certain degree turned the left Flank. His Lordship therefore directed the left wing to front obliquely towards the Lippe still however preserving its position on the heights and thereby commanding the low Ground between him and the River.²⁴⁰

This manoeuvre had not been undertaken on the battlefield previously, with the army only needing to shake itself out from column of march into line of battle. As the Army had no need to execute this pivot manoeuvre in earlier battles we do not know how comfortable they were performing it in the early stages of the war.

We have talked in a previous chapter about the line infantry and their fire drill, specifically the regiments shift from the confusing platoon fire to the alternate fire used by other countries, most notably by Prussia. The rate of fire from British infantry had always been of a high level, the French themselves commenting on the superiority of British infantry firepower during the War of the Austrian Succession.²⁴¹ Yet, improvements in firepower were observed during the War of the Austrian Succession, with the infantry performing much better in the later battles of Fontenoy, Rocoux and

²³⁹ J.A. Houlding, p.348.

²⁴⁰ ADD MS 28552 fol. 23.

²⁴¹ J.A. Houlding, p.359.

Laffeldt as opposed to Dettingen. Moreover, an observation in the improvement of the infantry firepower can not be identified during the battles of the Seven Years War, as they maintain the same level of ability in the first battle compared to the later ones. This may be due to the period of a year between the British contingent's arrival in July 1758 and their use at the Battle of Minden in August 1759. Ferdinand may have intended the regiments to improve through constant drill to attain a high level of ability before he utilised them in battle, especially as many of the battalions would have been learning the new system of alternate fire as the military order books show.²⁴² It appears there was no improvement to be made as the training in this period had already brought them up to the required level of excellence. The repetitive training would also have been needed to improve the experience of new drafts of men, who had been brought over to replace the injured in previous battles or on campaign, or the regular desertions that most armies found impossible to prevent during the course of the war; for example 4928 men had to be drafted into the army in April 1761.²⁴³ The excellence of the firepower is also witnessed at Vellinghausen, where a high level of fire superiority must have been maintained for Lord Granby's corps to have held its position for most of the afternoon on the 15 July, similar to General Sporcken's brigade at the battle of Minden; in fact Lord Granby in his orders for the day hints at the vast amount of ammunition spent by the regiments during the battle, to the degree that some battalions in the line were lacking ammunition to fire at the enemy during parts of the engagement.²⁴⁴

Improvement through experience is also seen through the actions of the picquets. Advanced training in conducting and combatting the small-war tactics employed by their enemies would now have to be learnt while on campaign, features

²⁴² The Hon. Frederick Lindley Wood, M.L.S. Clements, S. Phillip Unwin, p.560.

²⁴³ London, National Archives Kew, SP 41/22 fol.5

²⁴⁴ London, British Library, ADD MS 28855 fol. 54.

that would be necessary for picquets to be adept at while on outpost duty.²⁴⁵ The anonymous officer who translated De Jeney's *Partisan*, highlights how British officers were unacquainted with the knowledge on irregular warfare, due to his ignorance of the vast amount of French literature on the subject, as he writes in his notes:

When I had finished the Work, I began to have an higher Opinion of its Merit than I had at first conceived; and concluded, that it might be no unacceptable Book to many of my Brother-officers, especially those in the light Troops, as I do not remember to have before seen any thing of the kind, in any language.²⁴⁶

Despite Houlding's description of the men training in these skills, it is only in the later battles of the war, particularly Vellinghausen where these features can be identified. This insinuates a synthesis whereby the men became better at engaging in irregular warfare through the application of first-hand experience. The picquets had been massed together at Minden as an ad-hoc formation to capture the village of Hartum, and were not even utilised at Warburg as a distinct unit, the men instead staying with their parent battalions. This confirms that the picquets were not previously used as skirmishers. However, Vellinghausen gives us many situations in which the picquets were utilised in this manner. The spaced out formations were used to skirmish with the enemy to hinder their advance, holding many defensive positions on the battlefield separate from the main force, such as the villages of Vellinghausen and Kirch-Dinckern, as well as the crossings at Kleine-Muhl and Scheidingen; all very similar to the use of partisan forces as depicted in the works by Grandmaison and de Jeney;²⁴⁷ their use is also similarly identified through the constant skirmishing during the night of the 15 July:

²⁴⁵ J.A. Houlding, p.348.

²⁴⁶ M. de Jeney, *The Partisan: or the Art of making War in Deachment* (London: R. Griffiths, 1760) p.IV.

²⁴⁷ M. de Grandmaison, *A Treatise on the military service, of light horse, and light infantry, in the field, and in the fortified places*, trans. Major Lewis Nicola (Philadelphia: Robert Bell, 1777) p.47–8; M. de Jeney, pp.46–47.

The advanced Centinels of the two Armies during the Night being only separated from each other by the hollow way and in some places by a small field or two each sending Patroles where it was possible, those on our part were chiefly intended to discover whether the Enemy were employed in fortifying the height at the Landwher which they had got possession of in the evening & from which it might be difficult to dislodge them but the nearness of the two Armies prevented the possibility of discovering this, the Patroles immediately meeting and skirmishing with each other during the night.²⁴⁸

I have already outlined the virtues of the artillery at Minden and Warburg, but they were equally as successful at Vellinghausen. The Seven Years War certainly identifies the shift in artillery tactics that would become notable in the Napoleonic Wars, where the artillery would have a much more profound effect on the battlefield. The artillery had a crucial role at Minden in defeating the French, and this was no less evident later at Vellinghausen. The manoeuvrability illustrated at Minden and Warburg was equally conspicuous at Vellinghausen, where Heinrich Count of Schaumburg-Lippe-Buckeburg, a genius in artillery warfare at the time, quickly transferred the bulk of the Allied army's artillery over to the left flank when the crisis of Marshal Broglie's rapid advance had been identified.²⁴⁹ The transition of the artillery not only maintained Lord Granby's position on the Dinckerberg, but also eventually won the battle for the Allies. In describing the French attack on Vellinghausen a Journal describes how the enemy 'were so much exposed to our Cannon in attempting to penetrate there that they were not able to gain that Post which was still occupied by a detachment of our Picquets'.²⁵⁰ This galling fire was maintained for most of the evening and into the second day. Subsequently, when Wutginau's attack was delivered on the French right flank, the journal continues to detail the effect of the artillery on the enemy:

²⁴⁸ ADD MS 28552 fol. 25–26

²⁴⁹ Ibid, fol. 24.

²⁵⁰ Ibid, fol. 25.

The heavy fire of these fresh Troops against the Enemy posted in the enclosures on the Ham road and the great effect of Lord Granby's Artillery the principal part of which was now placed On the height before his center galling extremely the Enemy posted behind the Landwher & raking the height and wood called the Rosenholtz as far as the Village of Bruningsen.²⁵¹

This journal repeatedly indicated the effectiveness of the Allied army's artillery, and the now premier position for which artillery had on the battlefield. The guns access of the battlefield due to the increased range from the heights of the Dinckerberg, highlights Ferdinand's willingness to mass his guns in large batteries from which to break the enemy's forces; though whether the credit should go to the eminent Count of Schaumburg-Lippe-Buckeburg could be debated. Though there is no general skill improvement identified through the stages of the war, as they maintained a high level of ability in all three battles they were engaged, this would indicate that the work at the academy left the artillery better prepared for the war from the start. Unfortunately I cannot quantify the artillery's improvement, as I cannot investigate how many losses in the French army were attributed to the artillery, yet its effects on the outcome of battles indicate its high level of ability. Apart from the brigades of artillery, skill improvement can be observed in the utilisation of the battalion guns. These weapons were usually short six-pounders and two guns were provided to each regiment. An anonymous Journal provides us with the comical use of the battalion guns at Warbug where the soldiers poor understanding of the recoil of the cannon resulted in the guns falling off the precipice into the river Dymel to which 'at that moment embarrassed more than can well be expressed'.²⁵² Development must have been made as Major Campbell of the

²⁵¹ Ibid, fol. 26–27.

²⁵² Ibid, fol. 42.

Highlanders describes how one of his men performed wonders with one of the Hanoverian battalion guns at Vellinghausen:

Placing a bough before the mouth to mask his gun, he did great execution on the line of the French engaged man to man with the Hanoverians; after the action I found the round shott had taken two and three in a line, the grape sticking like Indian corn in some of them.²⁵³

The second improvement conducted on an Army was through the development of new weapons technology. Yet during the course of the Seven Years War this underwent little change. Development tended to have appeared throughout the peacetime stages of the century. This is the case in the artillery, where as I have identified already, the creation of the new foundry at Woolwich as well as the new techniques in improving cannon boring provided greater accuracy for the artillery. Equally the better metallurgy techniques coupled with mathematical reasoning allowed the creation of the lighter short six-pounder,²⁵⁴ which having been invaluable at Minden and Warburg, was equally useful at Vellinghausen. As such the area of weapons technology cannot be considered a major factor towards the improvement of the army during the war.

With this in mind, the greatest change is observed through the improvement in doctrine or tactics. One major shift in tactics can be seen through the adoption of 'light' formations to the army, adding to the existing use of picquets. These men were trained in the application of irregular or partisan warfare while on campaign, as well as fighting in open order advance guard units on the battlefield. With the formal adoption of the *Legion Britannique* into the ranks of the British Army, as well as the introduction of

²⁵³ Duke of Roxburghe, Sir H. Campbell, Earl of Strathmore, Countess Dowager of Seafeld, vol. 14 part 3 (London: Eyre and Spottiswoode, 1894) p.51.

²⁵⁴ For the general improvement in the techniques at the Woolwich foundry see Robert Wilkinson Latham, *British Artillery on land and Sea* (Newton Abbot: David & Charles, 1973) pp.8–9.

the light units of the Highlanders and the 15th Light Dragoons, we see a shift towards this adoption of irregular-warfare tactics already in use by most European states. This transition during the war reached its pinnacle at Vellinghausen, indicating a slow alteration to the Army, considering that these tactics had been experienced in the War of the Austrian Succession, and that the officers had been exposed to these theories at the very early stages of the war through the plethora of literature spreading through the British market.²⁵⁵ At Warburg the light elements had not been fully engaged and the limited accounts of Kloster-Kamp mean that we cannot deduce their fighting style, though we can infer from their use in the advance guard that they were trained in these roles. Moreover, the struggle on the left flank at Vellinghausen firmly indicates the effects of this shift in doctrine. The multiple formations of light troops available to the British forces as opposed to earlier battles are the greatest indicators. Lord Granby's division included the light formations of the two battalions of *Legion Britannique*, the two battalions of Highlanders, the ad-hoc formations of Hessian Chasseurs, and the 15th Light Dragoons. These men were pitted against the French light troops consisting of the *Volontaires de Saint-Victor*. Having been forced from the wood around Vellinghausen they engaged each other in the enclosures and fields leading from the Dinkerberg to the river Lippe. The rear-guard action taken by the light troops is portrayed in the Journal, related how the light troops 'had several times faced about to stop the Enemy without effect',²⁵⁶ which mirrored the doctrine on how light infantry should be utilised in skirmishing with the enemy in order to delay their advance.²⁵⁷ The Highlanders had already skirmished with the advanced picquets of the enemy on the 13 July, where they had endeavoured to halt the advance of a detachment of Marshal Broglie's force who had the intention of investigating the Allies position, which chronicles Prince

²⁵⁵ See Light Infantry Chapter, particularly pp.44–45.

²⁵⁶ ADD MS 28552 fol.23.

²⁵⁷ Stephen Brumwell, *Redcoats: The British Soldier and War in the Americas, 1755–1763* (Cambridge: Cambridge University Press 2002) p.518.

Ferdinand's willingness to use them to counter the enemy's reconnaissance in a *petite-guerre* fashion.²⁵⁸ Instead of the simple counter-measures as advised by Humphrey Bland to deal with the enemy skirmishers,²⁵⁹ the army had now adopted the use of distinct units of skirmishers as seen in the other elements of the Allied army as well as the French armies. By the time of Vellinghausen, these units had become adept at the irregular-warfare fighting style, as identified in the accounts, and were pro-actively used by the Allied commanders to engage the enemy skirmishers in the same manner. The use of the light dragoons in a skirmishing capacity is also notable during the battle, as they were utilised in conjunction with the light infantry to engage the *Volontaires de Saint-Victor* who were defending Peters House (a farmhouse stronghold), ultimately securing Lord Granby's left flank.²⁶⁰ Having probably been used at the battle in a dismounted capacity given the topography of the enclosed country, it shows their use as hybrid infantry, one of their roles as light dragoons.

Another shift in doctrine which we see at Vellinghausen is the adoption of new division sized formations, which would provide sub-commanders with an all arms capability when apart from the support of the main army. Instead of the 'columns' that were formed from multiple brigades of the same unit type utilised at Minden, the Allied army began to form divisions of control that would be composed of all unit types. Warburg and Kloster-Kamp each observed detached commands under the Hereditary Prince of Brunswick formed by combining cavalry, infantry, and artillery. This reached its apotheosis at Vellinghausen, where Lord Granby's division was made up of cavalry, light infantry, line infantry, and a battery of Hanoverian artillery.²⁶¹ This all-arms capability allowed Lord Granby to utilise all of his troops to work in conjunction while

²⁵⁸ ADD MS 28552 fol. 20.

²⁵⁹ See previous Light Infantry Chapter, particularly pp.44–45, 51.

²⁶⁰ ADD MS 28552 fol. 24.

²⁶¹ *Ibid*, fol. 21.

engaging the enemy on the isolated left flank. His light cavalry scouted the approach of the French, while his light infantry skirmished with the enemy, and his line infantry ultimately held back the main assault supported by the firepower of his artillery on the Dinckerberg. This seems to be forward planning by Prince Ferdinand, as he aimed to give his general all the tools necessary to defend himself for an extended period of time away from the support of the main army in case he was attacked. This would later be a significant feature in the development of army structures associated with the Corps d'Armée of Revolutionary and Napoleonic French armies.

Ultimately then the British army underwent several changes that improved its conduct as a fighting force. Outnumbered dramatically at Vellinghausen, the professionalism in the men allowed the army to critically hold the unforeseen attacks, shift their resources to create a localised numerical superiority and then strike back to win the battle. This professionalism was brought about chiefly through two factors: one being the many improvements within the army, those minor changes that saw many of the regiments become experienced units at conducting themselves in war; while the second more noticeable change was from the addition of new doctrine and tactics which, in the case of the light forces, had come about considerably later than their allies and enemies. Yet their adoption of massed batteries to decide the outcome of the battle was an innovative and crucially decisive feature. These improvements explain why the army succeeded in the many engagements they were part of.

Conclusion

Upon reading the accounts of the British army during the Seven Years War, they paint a picture of men displaying exemplary courage, whose fortitude usually won them the battles they took part in; as Mr Reiche says of the army at Minden: ‘Their Bravery & Ardour, are universally extolled’.²⁶² However when you delve deeper and cross reference the many sources, only then can you witness the many changes that developed the army into an experienced force capable of synchronising its several component parts together to achieve success in battle. This thesis has aimed to cover the gap in research in this area, utilising previously unidentified sources to show how the army improved into a professional force by the time of the battle of Vellinghausen in July 1761. By breaking down my thesis into several chapters, each focusing on a section of the army, and then identifying their improvements through the case study of the battle of Vellinghausen, this format has allowed me to identify the elements of the army and how they improved to become an integral part of the success of the Allied army. The limited discussion on the British army in Western Europe has usually focused on areas away from the battlefield, such as the economic and logistic factors, welfare, or training, but this thesis has spread into the under-developed section of battlefield combat in military history.²⁶³

In conclusion, what does this thesis tell us about the army during this period?

One notable feature is the strong influence the Prussian army had on the British army at this time. Several tactics from their regulations were assimilated into the army and

²⁶² London, British Library, ADD MS 32894 fol. 115

²⁶³ Notable works include: Erica Charters, *Disease, War, and the Imperial State* (Chicago: Chicago University Press, 2014); J.A. Houlding, *Fit for Service: The Training of the British Army, 1715–1795* (Oxford: Clarendon Press, 1981); H.M. Little, ‘The Emergence of a Commissariat during the Seven Years War in Germany’, *Journal of the Society for Army Historical Research*, vol.61 no. 248 (1983) 201–214.

strongly influenced the way the regular line infantry and cavalry fought. The British infantry fought with more aggression, utilising the less complicated ‘alternate fire’ system, rather than the regulations ‘platoon fire’ system, and proactively attacking with the bayonet whenever the chance arose. Furthermore the use of grenadiers in special shock battalions would have a significant effect on the outcome of battles in the Western German theatre. The Allied success at the battles of Warburg and Vellinghausen were heavily influenced by the actions of the British grenadiers, whose use in separate formations provided the Allied army with an elite core of troops to utilise in certain phases of the battles. The line infantry who had strongly affected the course of battles in the War of the Austrian Succession retained the sense of dogmatic fortitude that was consistent throughout the century. This discipline and bravery was key to their success as attributed by the many accounts by officers on the battlefield; as Major General Waldegrave stated in his report of the battle of Kloster-Kamp: ‘I did not see any Officer of any Nation, but what exerted himself to the utmost, and the Men never offered to retire while they had ammunition’.²⁶⁴

Meanwhile the cavalry’s adoption of the Prussian style galloping attack, when coupled with the cultural dash and aggression that we see in the British troops, formed this arm of the Allied army into a powerful force. It was the British cavalry’s use in this format that swung the battle in favour of the Allies at Warburg. Further research will be needed to identify to what degree the Prussian system was adopted into the army through the training, but due to length constraints this thesis can not sufficiently cover this topic. While Houlding has delved deeply into the training of the British army in the Eighteenth Century, his insight provides great in-depth detail on the level of British training in the peacetime and wartime stages of the century, but further research is needed to address the scale of the training conducted while on campaign in Western

²⁶⁴ London, National Archives Kew, SP 87/32 fol. 241

Germany.²⁶⁵ This would allow me to identify how far the Prussian influences were adopted into the army, and whether they were practised regularly throughout the war.

Away from the core strengths of the British army in the period, two branches would witness significant changes that would dramatically improve the army's ability within battles. Steven Brumwell excellently depicted the changes to the army in America with special attention to the development of light infantry units.²⁶⁶ This would also be witnessed in Western Germany, where though the American changes were not instituted until late in 1761, the European influences from the Germanic contingents of the Allied army, as well as the opposing French, brought about a new transformation to the British infantry. The extensive literature on irregular warfare that filtered through into the British market, as well as the experiences of combatting the new style of tactics in Europe, led to initiatives that developed British forces capable of fighting in this style. In fact Campbell Dalrymple in his work *A Military Essay*, 1761, identifies the cultural shift pervading the British army, as his treatise provides many descriptions of how to conduct irregular warfare from a British standpoint.²⁶⁷ Meanwhile the Highland regiments, who had been specifically recruited to provide the irregular open-order tactics needed in the British army in Europe, would have a notable effect on the way the British army fought. Their outpost and skirmishing skills, were key to the events of the battles of Kloster-Kamp and Vellinghausen, such as their surprise assault on *Fischers Corps* at the seminary of Kloser-Kamp, or their protracted skirmish with the *Volontaires de Saint-Victor* on the left flank at Vellinghausen.

²⁶⁵ J.A. Houlding, *Fit for Service: The Training of the British Army, 1715–1795* (Oxford: Clarendon Press, 1981)

²⁶⁶ Stephen Brumwell, *Redcoat: The British Soldier and War in the Americas, 1755–1763* (Cambridge: Cambridge University Press 2002) pp.228–36.

²⁶⁷ Campbell Dalrymple, *A Military Essay, Containing reflections on the raising, arming, cloathing, and discipline of the British infantry and cavalry* (London: D. Wilson, 1761) pp. 11–12, 251–52, 282–83, 372.

Furthermore, a vast change was witnessed in the artillery. With the development of the Royal Military Academy at Woolwich in 1741 the army had begun to produce a number of well-educated cadets for the artillery, who had begun to take up positions of command by the time of the Seven Years War. Their knowledge of the burgeoning science of ballistics through the teachings of Benjamin Robins and John Muller created an artillery force that had an advantage over their opponents who had not been introduced to these new theories.²⁶⁸ This would be witnessed throughout the Seven Years War, where the British artillery regularly showed their superiority over their French opponents. The use of the artillery in massed batteries was also a notable development in warfare at the time. Instead of spacing out the guns to cover the whole line, Prince Ferdinand placed his brigades together at certain places of the battlefield, where their weight of firepower could punch through the enemy formations. This tactic wouldn't become famous till much later under the tutelage of Napoleon Bonaparte, whose battles during the Napoleonic wars featured this use of guns in massed batteries. The massed batteries deployed at the windmill of Hahlen at Minden were crucial to the success of the British infantry. Likewise, their use in massed formations on the Dinckerberg hill at Vellinghausen, held Marshal Broglie's assault and then defeated him. This identifies the increased importance artillery was having on the battlefield. Just like the later French Revolutionary and Napoleonic wars, artillery was utilised in a manner than would win battles for the Allied army. One aspect that would be interesting to delve into would be the degree of education/training conducted at the Woolwich academy. Though we have the limited information from the *Rules and Orders for the Royal Academy at Woolwich* it would be interesting to investigate if there was a

²⁶⁸ Benjamin Robins, *New Principles of Gunnery* (London: J. Nourse, 1742); John Muller, *A Treatise of Artillery* (London: J. Millan, 1757).

syllabus, illuminating to what degree the cadets were educated and how that applied to the artillery.²⁶⁹

The battle of Vellinghausen indicated that the army developed into a force capable of affecting the course of a battle, one that had absorbed elements from Europe as well as systems that countered them, yet it still retained the core of what had given it success throughout the early part of the Eighteenth Century. However, the army still had weaknesses, such as the low mobility of the infantry, which cost the Allies victory at Kloster-Kamp; as well as occasionally neglecting its reconnaissance responsibilities, for example when Marshal Broglie's force was able to surprise Lord Granby at Vellinghausen. Ultimately this thesis highlights the improvement the British army had over the course of the Seven Years War. As well as the many general improvements that the army witnessed through training and combat experience, which would turn them into a seasoned force, several changes in tactics and the development of new units were crucial to the army adapting to the new methods of warfare. All these change turned the British army into a core strength of the Allied army, and fundamentally made the British army a success in Western Europe.

²⁶⁹ Anon, *Rules and Orders for the Royal Academy at Woolwich* (London: J. Peele and W. Wilkins, 1741).

Appendix 1

Officers in the artillery in West Germany who had been Cadets at the Academy

	Cadet, Matrosse, or Gunner	Fireworker	2nd Lieutenant	1st Lieutenant	Captain Lieutenant	Captain	Rank at Battle of Minden 1759	Rank at Battle of Warburg 1760
William Phillips	1st August 1746 CG	2nd April 1747	1st March 1755	1st April 1756	Never	12th May 1756	Captain	Captain
Forbes Macbean	3rd August 1743 CM	4th April 1745	Never	1st March 1755	1st April 1756	1st January 1759	Captain	Captain
Griffith Williams	4th April 1744 CG	6th April 1745	Never	1st March 1755	1st January 1759	12th February 1760	Captain Lieutenant	Captain
Edward Foy	1st March 1754 C	1st March 1755	12th May 1756	2nd April 1757	1st January 1759	2nd February 1764	Captain Lieutenant	Captain Lieutenant
Duncan Drummond	1st March 1747 C	1st August 1747	29th October 1755	12th May 1756	2nd April 1757	24th October 1761	Captain Lieutenant	Captain Lieutenant
Richard Harrington	1st August 1756 C	8th June 1757	20th March 1760	2nd February 1764	Never	Never	Fireworker	2nd Lieutenant
John Carden	1st February 1756 C	1st April 1756	4th January 1758	27th December 1759	23rd May 1764	Never	2nd Lieutenant	1st Lieutenant
Robert Rogers	1st November 1755 C	12th may 1756	4th January 1758	22nd February 1760	12th November 1765	Never	2nd Lieutenant	1st Lieutenant
Vaughan Lloyd	Never	10th May 1756	4th January 1758	28th December 1759	23rd May 1764	14th October 1774	2nd Lieutenant	1st Lieutenant

Source: John Kane, General William Askwith, *List of the Officers of the Royal Regiment of Artillery from the Year 1716 to the year 1899* (London: William Clowes and sons, 1900) pp.4–13

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