

**‘DESTRUCTIVE AND FORMIDABLE’:
British infantry firepower, 1642 – 1765**

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Abstract

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Degree: PhD

Destructive and Formidable: British Infantry Firepower, 1642 – 1765

This work is an examination of the effectiveness of British infantry firepower from 1642 to 1765, it establishes the manner in which that firepower was organised and managed and how it developed. In order to achieve this it has been necessary to develop and propose a new approach to the study of military history; practical military history, which uses a thorough understanding of the practices and procedures of the army to interpret and analyse contemporary writings on the subject.

In doing so it has been possible to identify and analyse the effectiveness of the tactical doctrine and combat techniques of British infantry during the English Civil Wars and then to trace a continuous line of development of doctrine and technique from then until 1765, in the immediate aftermath of the Seven Years War, when this study concludes. It has also been possible to analyse the battlefield effectiveness of those techniques and to identify previously unrecognised aspects of them. It has also been possible to correct some long held misconceptions and to pinpoint times when key changes were brought about, such as the introduction of the organisation of platoons into firings.

As well as identifying, for the first time, a single underlying tactical doctrine it has also been possible to clarify the manner in which the methods used to execute that

doctrine changed. The work has identified the origins of platoon firing, its earliest form and its subsequent developments during the War of Spanish Succession, thereby correcting the long standing misidentification of the form that it first took and the idea that it remained largely unchanged from the 1680s to the 1740s. It has also identified when changes occurred and analysed the implications for the effectiveness of the firepower and, in some instances, been able to demonstrate in absolute terms, the effectiveness of that firepower.

This work will enable military historians to achieve an understanding of how British infantry fought, how they achieved what they did, rather than simply what those achievements were. In using a practical military history approach it also proposes a new approach to military history that will enable an analysis of events to be given, rather than a simple narrative.

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1: Introduction

The objective of this work is to examine and analyse the use of firepower by British infantry from 1642 to 1765 in order to establish the tactical doctrine and the methods, or combat techniques, for applying that doctrine that were employed throughout that period. The year 1642 is taken as the starting point as it saw the outbreak of the English Civil War, in which conflict lie the origins of the British Army and the infantry that are the subject of this work. By 1765 and the end of the Seven Years War, British infantry had established a considerable reputation and become recognisable as the troops who would fight well, but in vain, in the American War of Independence, and most effectively against the forces of Napoleon. It is thus the formative period in the history of the British Army. This work will seek to establish if there were doctrinal changes from war to war as circumstances changed, or if there is one continuous, underlying doctrine that has underpinned the methods and combat techniques developed. It will also identify and explain the developments in the methods of delivery and organisation of firepower. Both doctrine and methods will be analysed to ascertain their effectiveness.

This study is necessary because there is a consensus among modern writers of military history that the British infantry of the eighteenth century repeatedly achieved a high level of effectiveness and superiority over its enemies in firepower and relied on that firepower to win battles. Despite that consensus, however, no historian has yet traced to its beginning the development of the doctrine or the means by which that superiority was achieved and maintained over such a long period, in a variety of theatres, and against a wide variety of enemies.

Charles Spencer in his account of Blenheim, 1704, wrote how Anglo–Dutch firepower ‘cut down large swathes of their opponents in a moment’.¹ Jeremy Black makes several similar observations about the British infantry at Dettingen in 1743, ‘French cavalry attacked British infantry only to be cut to pieces by their firepower’, at Fontenoy in 1745, ‘the British infantry displayed their discipline and fire control’ and at Minden, ‘The courage and fire discipline of the British infantry won the battle’.² Frank McLynn has written of the British infantry at Minden in 1759, ‘A series of crashing volleys from the superbly disciplined British regiments tore the heart out of the French cavalry’.³

However, none of these writers supplies an answer to the question of how this superiority was achieved and then maintained. One possible explanation for this omission is given by the eminent military historian of the late seventeenth century John Childs. In the introduction to his book *The Nine Years War and the British Army 1688-1697* he describes a ‘new military history’.⁴ This he describes as dealing with social, political and economic forces at the expense of traditional campaign history. His explanation for this development is the desire among ‘professional historians at universities to bring academic respectability to a branch of their discipline which has long been the poor relation of its political, religious, social and economic brothers’.⁵ As the self confessed author of a trilogy of new military history dealing with the British Army from 1660 to 1702, Childs also states that an army’s campaigns, actions

¹ Charles Spencer, *Blenheim, Battle for Europe* (London, 2004), p. 255.

² Jeremy Black, *Warfare in the Eighteenth Century* (London, 1999), p. 162, p. 181 and p. 188.

³ Frank McLynn, *1759, The Year Britain Became Master of the World* (London 2005), p. 276.

⁴ John Childs, *The Nine Years War and the British Army* (Manchester, 1991), pp. 2-3.

⁵ Childs, *The Nine Years War*, p. 3.

and methods are as important as the topics of the new military history. He claims that in *The Nine Years War and the British Army, 1688-1697* he will don the coat of the 'old military historian' and observe the British Army in action.⁶ To some extent Childs achieves that aim, but what emerges from the book is a limited picture of an army in action and even less of its methods.

Writing about military history books dealing with the period 1689 to 1763 Brent Nosworthy wrote: 'The so-called higher levels of warfare, generally referred to as the "operational" and "strategic" levels, are particularly well covered.'⁷ However, he goes on to write: 'Though we are given general information, such as the types of formations the troops employed and some of the methods they used to fire their weapons, the picture blurs as soon as we increase the degree of magnification.'⁸ Elsewhere he has expressed his view more bluntly: 'The traditional approach used to dissect and analyse battles which explains "what" occurred during a particular contest has unfortunately largely ignored the "how" and the "why".'⁹ These are precisely the shortcomings of Childs in *The Nine Years War*.

Nosworthy himself is not entirely successful in his stated aims:

The goal of the present work, *The Anatomy of Victory: Battle Tactics 1689-1763*, is to reconstruct each of the major tactical and grand tactical doctrines as they existed during the period under consideration, and to explore how these doctrines evolved to produce what could be called "Fredrician warfare".¹⁰

⁶ Childs, *The Nine Years War*, p. 3.

⁷ Brent Nosworthy, *The Anatomy of Victory, Battle Tactics 1689-1763* (New York, 1992), p. xi.

⁸ Nosworthy, *The Anatomy of Victory*, p. xi.

⁹ Brent Nosworthy, *Battle Tactics of Napoleon and his Enemies* (London, 1995), p. xv.

¹⁰ Nosworthy, *The Anatomy of Victory*, p. xiii.

He does indeed explore the tactical doctrines of the European nations through the period, but is primarily concerned with France and Prussia with whom he deals in some considerable depth, looking at their doctrines and ongoing tactical evolution. However, his treatment of the British Army does not explain the origins of the British commitment to the doctrine of firepower or how and why it was so unwaveringly adhered to for so long, arguably to the present day. Furthermore, despite his stated goal he still fails to explain the detail of how and why events and actions unfolded as they did. Although he gives one of the better explanations of platoon firing in the British Army he does not address its development through the period as the British Army sought to increase its effectiveness.¹¹ His treatment of its control and management is also superficial. He is over reliant on a single contemporary source, Brigadier Richard Kane, and makes no mention of the arguably more important work of Major General Humphrey Bland.¹² In this respect there is little in Nosworthy that could not equally well be gleaned from the earlier work of David Chandler.¹³ What Nosworthy does provide is an excellent account of what was going on in the rest of Europe, which provides a useful source of information with which to compare developments in the British Army.

Other books that deal with the whole or a greater part of this period provide little more information or explanation of British Army doctrine and tactics. Black's *Warfare in the Eighteenth Century* contains the following on platoon firing: 'Battalions were drawn up only three ranks deep, and firings were by groups of platoons, in a process

¹¹ Nosworthy, *The Anatomy of Victory*, pp. 55-57.

¹² Brigadier-General Richard Kane, *Campaigns of King William and the Duke of Marlborough, Also A New System of Military Discipline, for a Battalion of Foot on Action* (London, 1745); Humphrey Bland, *A Treatise of Military Discipline* (London and Dublin, 1727).

¹³ David Chandler, *The Art of Warfare in the Age of Marlborough* (London 1976).

designed to maximize the continuity of fire and control.’¹⁴ As a description of what was the basic building block of infantry tactics throughout Europe during the Seven Years War, it is not very informative. Similarly Richard Holmes’ *Redcoat* deals with the British Army from the mid-eighteenth century to the mid-nineteenth century and it is a wonderful examination of the character and experience of the British Army, but not of technicalities like platoon firing. When Holmes deals with musketry and platoon firing he gives the reader the sense of the experience, not the minutiae of how it was conducted.¹⁵

One book that might reasonably be expected to address the minutiae of infantry fire systems is *Firepower* by Major General B. P. Hughes and which is subtitled *Weapons Effectiveness on the Battlefield, 1630-1850*.¹⁶ What Hughes endeavours to demonstrate is the absolute effectiveness of weapons, that is how many hits a weapon or weapons might achieve. In doing so he considers the theoretical performance of a weapon and then how that might be affected on the battlefield by various factors, such as smoke. Scant attention is paid to how the weapons are handled and managed to generate the firepower he tries to assess.

One might also expect much from the military historian, Christopher Duffy, who has written extensively about eighteenth century warfare and the Prussian Army in particular. His *The Military Experience in the Age of Reason* is a work that appears in

¹⁴ Black, *Warfare in the Eighteenth Century*, p. 158.

¹⁵ Richard Holmes, *Redcoat, The British Soldier in the Age of Horse and Musket* (London, 2002, paperback), pp. 195-99.

¹⁶ Major-General B. P. Hughes, *Firepower, Weapons Effectiveness on the Battlefield, 1630-1850* (London, 1974).

most bibliographies.¹⁷ In this he sets out to examine the characteristics of eighteenth century warfare. However, he writes almost exclusively from a Prussian viewpoint, giving some detail about Prussian platoon firing and its effectiveness or otherwise, but makes little mention of the British experience, with Minden hardly being mentioned. He also gives an inaccurate description of the process of loading and firing a musket, which leads one to question his understanding of the lower levels of infantry drill and tactics.¹⁸

Possibly the best book on the British Army of the eighteenth century written in recent times is John Houlding's *Fit for Service*, which looks at the training of the army between 1715 and 1795.¹⁹ Houlding's intention, which he fulfils admirably, is to explore the levels of training and achievement of the army and the reasons that militated against regiments being declared fit for service. Tactical doctrine is not a theme of this work, but he does make a telling comment on this with regard to the British Army. He suggests that 'a sound appreciation of the supremacy of firepower over all other forms of combat had been a lesson well learned by the end of Marlborough's campaigns, and had been taken to heart in the army; hence the issue of shock- versus fire-tactics, which so stirred the French after 1714, was not significant in Britain'.²⁰ He does not, however, explore the origins and subsequent development of this doctrine as it is outside the scope of his work. He does trace the history of drill books and records the changes in them, but without any explanation of how the changes work. For instance, he claims that the introduction of the 1756

¹⁷ Christopher Duffy, *The Military Experience in the Age of Reason* (London 1987).

¹⁸ Christopher Duffy, *The Military Experience in the Age of Reason* (Ware, 1998, paperback), p. 114.

¹⁹ John Houlding, *Fit for Service, The Training of the British Army, 1715-1795* (Oxford, 1981).

²⁰ Houlding, *Fit for Service*, p. 167.

Regulations increased the rate of fire by an additional round every two minutes, but without explaining how or from what to what.²¹ Houlding also traces the history of theoretical writing on military tactics and doctrine with particular reference to the British Army. He devotes a short section of his book to a brief discussion of platoon firing and its common variants, but it is a snapshot to help the reader understand what the infantry were training to do. It does not explain the management and development of it and does not address some of the difficulties implicit in it, but that is not its purpose.²²

Houlding, however, is one of the few authors to criticise the effectiveness of British infantry. His assessment of its performance at Dettingen, 1743, is scathing, but he is quite clear that this is due to a lack of training and practice at the beginning of a war, the War of the Austrian Succession, rather than any fundamental flaw in the underlying doctrine.²³ Writing about Fontenoy, 1745, he describes the infantry as performing 'brilliantly' and adds:

The controlled volleys were so effective that the *Gardes Francaise* panicked and fled; indeed, even before engaging the *Gardes* had feared to enter into 'une affaire de mousqueterie' with the English foot, knowing that it would have 'trop d'avantage par sa superioritie'.²⁴

Houlding's excellent book is essential for anyone with an interest in the British Army of the eighteenth century. His chapter *The Drillbooks: Regulations by Authority and Private Publications* is an invaluable guide to the contemporary literature on the subject.

²¹ Houlding, *Fit for Service*, p. 199.

²² Houlding, *Fit for Service*, pp. 318-21.

²³ Houlding, *Fit for Service*, pp. 350-52.

²⁴ Houlding, *Fit for Service*, p. 359.

It might be suggested that books covering a long chronology are not likely to go into the detail required to give an explanation of how British infantry achieved their superiority, nor to understand the intricacies and minutiae of platoon firing let alone the subtle changes and developments that take place over the period under consideration. This information might rather be found in specialist studies of narrow periods or specific wars and campaigns and also here might be found examples of the failure of the British doctrine of reliance upon infantry firepower with which to challenge the consensus view. It is this narrower, more focused work that will be considered next.

At the start of this period, 1642, Britain was entering into a period of civil war that effectively kept it out of involvement abroad, but in which were laid the foundations of the regular, standing army with the formation of the New Model Army. It is a period that is much written about, but mostly concerning the political, religious and social aspects of the war.²⁵ The two most recent major works on the New Model Army have almost ignored the fact that it was a very efficient and effective army, concentrating more on the army as a radical, political influence in British history.²⁶ What military history there is that deals with the conduct of the war is mostly of the 'old' sort, concerned with generals and their campaigns, battles and sieges. Two books, however, one written in 1902, the other in 2005, do seek to inform about the 'how' of warfare during the English Civil Wars and the New Model Army in particular.

²⁵ For example; Martyn Bennett, *The Civil Wars in Britain and Ireland* (Oxford, 1997), Antonia Fraser, *The Weaker Vessel* (London, 1984), Christopher Hill, *The World Turned Upside Down* (London, 1972), John Morrill, *The Nature of the English Revolution* (Harlow, 1993); Ivan Roots, *The Great Rebellion* (London 1966).

²⁶ Ian Gentles, *The New Model Army in England, Ireland and Scotland, 1645-1653* (Oxford, 1992); Mark A. Kishlansky, *The Rise of the New Model Army* (Cambridge 1979).

The first and older of the two is Firth's *Cromwell's Army*.²⁷ Writing in 1992, in an introduction to the fourth edition, the civil war historian John Adair wrote: 'Yet Firth is still unsurpassed on the tactics of infantry, cavalry and dragoons on the battlefield.'²⁸ The chapter on infantry contains a considerable amount of detail on the technical aspects of the musket and its associated equipment, but only a few pages giving a fairly superficial description of how infantry of the English Civil War went about firing their muskets, including a little on the developments introduced by Gustavus Adolphus.²⁹ Firth does touch upon the first signs of a decline in the numbers of pikemen and the contemporary arguments concerning this, but misses the increasing reliance on firepower rather than shock on the battlefield during the civil wars.³⁰

The second of the two books is Keith Robert's, *Cromwell's War Machine*.³¹ Robert's covers much the same ground as Firth, but with considerably more detail on the ways armies formed and deployed for battle. However, he adds little to Firth when it comes to the delivery and management of infantry firepower, limiting himself to a basic description of the various ways of delivering fire as they appear in the contemporary military manuals. There is little analysis of actual combat.

Another work dealing with the civil wars requires mention, if only as a lesson. This is Carlton's *Going to the Wars*.³² This is primarily a social history of the wars, but one which deals comprehensively with the individual experience of war, for both civilian

²⁷ Sir Charles Firth, *Cromwell's Army* (first published London 1902).

²⁸ Firth, *Cromwell's Army* (London, 1992), pp. ix.

²⁹ Firth, *Cromwell's Army*, 94-98.

³⁰ Firth, *Cromwell's Army*, pp. 76-78.

³¹ Keith Roberts, *Cromwell's War Machine, The New Model Army, 1645-1660* (Barnsley, 2005).

³² Charles Carlton, *Going to the Wars, The Experience of the British Civil Wars 1638-1651* (London, 1992).

and soldier. Carlton deals with the realities of war and how it was fought, drawing extensively on first-hand accounts. Unfortunately, when dealing with the detail of drill, tactics and the nature of combat he reveals a lack of basic knowledge concerning things military and the Civil Wars in particular. He confuses ranks and files, makes basic errors about arms and armour and misinterprets accounts because of this lack of understanding of drill and tactics. For instance, he interprets an account of infantry 'charging their pikes' as meaning they carried out an attack on enemy pikemen, whereas it is clear that the account refers to the pikemen bringing their own pikes to the charge position.³³ It is only with a sound understanding of the military practices of a period that one can hope to accurately interpret and understand the contemporary accounts.

The period between the restoration of the Monarchy in 1660 and the outbreak of the War of Spanish Succession in 1701, including the Nine Years War, has long been the domain of John Childs, and his books have already been referred to. When we move onto the War of Spanish Succession we are moving into the territory of one of the country's most eminent military historians, the late David Chandler. Of his books the one that has most significance for this analysis is *The Art of War in the Age of Marlborough*.³⁴ The book is organised into four themes: The Horse, The Foot, The Artillery Trains and The Engineering Services. The section on The Foot deals, amongst other things, with weapons and equipment, organisation and training and the tactical handling of the foot. In his introduction Chandler writes: 'This volume is devoted to a fairly full examination of how the regimental officer and soldier fought

³³ Carlton, *Going to the Wars*, p. 134.

³⁴ David Chandler, *The Art of Warfare in the Age of Marlborough* (London, 1976).

and manoeuvred, whether in the line of battle or siege trenches, and of the equipment, doctrine and training that enabled them to perform their duty.³⁵

Chandler gives one of the clearest descriptions and explanations of platoon firing in any of the books mentioned here, but it is flawed. He bases his description on the work of Richard Kane, which was published some thirty years after the war and, as will be shown, does not reflect exactly how things were done during the War of Spanish Succession.³⁶ It is true that Kane's instructions apparently match the account of a fire fight at Malplaquet in 1709 where platoon firing was employed, but the account is somewhat vague on detail and could be from any battle up to the 1750s.³⁷ In fact, as will be shown, a lack of knowledge of the development of platoon firing has resulted in some misinterpretation of this event. There are also errors in the diagrams used to illustrate platoon firing.³⁸

Chandler does, however, draw attention to the ongoing debate in Europe on the merits of firepower as against shock-action, and gives a basic introduction to the thinking of the principle military theoreticians of the period, such as the Marquis of Santa-Cruz, the Chevalier de Folard and Maurice de Saxe, the latter being also a soldier of considerable ability. What he does not explain is how the British Army seems relatively unaffected by the debates between the supporters of *ordre mince* (linear tactics) and *ordre profond* (columnar tactics), which mainly concerned the French and Prussians for most of the eighteenth century.³⁹ This is not to detract from

³⁵ Chandler, *Art of Warfare*, p. 9.

³⁶ Chandler, *Art of Warfare*, pp. 116-19.

³⁷ Chandler, *Art of Warfare*, p. 120.

³⁸ Chandler, *Art of Warfare*, p. 118.

³⁹ Chandler, *Art of Warfare*, p. 130.

what is a comprehensive and sound introduction to the nature of warfare and its conduct at the beginning of the eighteenth century, and which introduces some of the trends that would continue right through the century.

Modern military history dealing with the wars of the middle of the eighteenth century that involved Britain is almost without exception straight narrative accounts or biographies.⁴⁰ Rex Whitworth supplies more examples of British infantry superior firepower, echoing the comments of Black and McLynn. In his account of Fontenoy he writes: 'Replying with disciplined and deadly volleys they shattered both French lines in succession,' and that due to this firepower 'two regiments of French cavalry, Noailles and the Carabiniers, were almost entirely destroyed'.⁴¹ In his biography of the Duke of Cumberland, Whitworth is not entirely uncritical of the British infantry. He writes that at Dettingen the first French cavalry charge 'frightened the British Infantry into firing ineffectively and too soon,' but he also attributes final victory to the 'discipline and courage' of the same infantry and their 'waiting to the last minute before firing'.⁴² When it comes to Cumberland's role in the Jacobite rebellion of 1745-1746 Whitworth makes an interesting statement.

Cumberland was convinced that victory went to those who held their fire until the appropriate moment. It required nerve...it required training... Having analysed the enemy's tactics at Prestonpans and Falkirk, Cumberland and his generals expected the rebels to adopt similar tactics again... Cumberland's idea was...for the platoons to fire alternately.⁴³

Whitworth describes Cumberland's analysis of the nature of the threat posed by the Jacobites' tactics and his response to that specific threat, which was a variation in

⁴⁰ For example; Fred Anderson, *Crucible of War* (New York, 2000); Tom Pocock, *Battle for Empire* (London, 1998); Rex Whitworth, *Field Marshal Lord Ligonier* (Oxford, 1958) and *William Augustus, Duke of Cumberland* (Barnsley, 1992).

⁴¹ Whitworth, *Ligonier*, pp. 101-102.

⁴² Whitworth, *Cumberland*, p. 32.

⁴³ Whitworth, *Cumberland*, p. 78.

normal tactics. This is one of the few statements by a modern historian not only of doctrine, but of tactical development. It also suggests that Cumberland played a significant role in determining how the British Army fought its battles. The implication of this is that whilst there was a steady development of the ways in which British Infantry delivered its fire, it was also capable of rapid adaptation to specific challenges.

Of Britain's wars of the middle of the eighteenth century, the one that has produced perhaps the most discussion is the Jacobite Rebellion of 1745-1746. The most recent, major contribution to this work is that of Christopher Duffy in *The '45*.⁴⁴ This substantial study contains a wealth of information, including topological and meteorological, but adds little to our understanding of how the British Army, referred to throughout the book as the Hanoverian Army, defeated the Jacobite Army at Culloden. He claims, without any evidence, that 'The Jacobites as a whole were better shots than their enemy,' at the same time quoting a Jacobite as saying 'the King's troops having a great advantage over them in firing'.⁴⁵ In his account of Culloden the devastating firepower of the British infantry is almost overlooked, Duffy being more concerned with extolling Jacobite achievements and bravery than giving the British Army any credit. Nor does he credit Cumberland with adapting the army's standard tactics to deal with the specific threat posed by the Highland charge.

⁴⁴ Christopher Duffy, *The '45* (London, 2003).

⁴⁵ Duffy, *The '45*, pp.117-118.

A more detailed account of how the British Army conducted itself during the rebellion is to be found in Reid's 1745, *A Military History of the Last Jacobite Rising*.⁴⁶ He gives due credit to the firepower of the British Infantry at Culloden and gives a brief description of platoon firing, but says little about Cumberland's innovations nor gives any real detail of the management of the infantry when delivering fire.⁴⁷ However, this is a narrative history and the detail supplied is sufficient to assist the general reader more interested in what happened than in how or why.

The ability of the British Army to adapt is a theme taken up and examined closely by Stephen Brumwell in his book *Redcoats*.⁴⁸ This covers the period of the Seven Years War, but looking specifically at the experience of the British Army fighting in the Americas. Brumwell sets out to examine the 'American Army', as he calls it, and its development in the face of the challenges of campaigning in North America, an environment very different from the traditional fields of Flanders. In doing so he claims 'the "American Army" acquired an ethos and tactical doctrine that set it apart from other British and European armies'.⁴⁹ He examines the army's early, disastrous setback at Monongahela and the tactical response to that.⁵⁰ But for all the novelty of Indian fighting and developing skills in irregular warfare he still makes the statements that unlike France, 'Britain had never doubted the superiority of fire over steel' and 'the British Army in North America spared no pains to maximise its firepower'.⁵¹ Indeed, he describes how the method of delivering fire was altered in the middle of the century, not least as a result of the influence of men such as James Wolfe. Wolfe

⁴⁶ Stuart Reid, *1745, A Military History of the Last Jacobite Rising* (Staplehurst, 1996).

⁴⁷ Reid, *1745*, pp.190-192.

⁴⁸ Stephen Brumwell, *Redcoats, The British Soldier and War in the Americas, 1755-1763*, (Cambridge, 2002).

⁴⁹ Brumwell, *Redcoats*, p. 6.

⁵⁰ Brumwell, *Redcoats*, p. 201.

⁵¹ Brumwell, *Redcoats*, p. 195 and p. 247.

referred to platoon firing as 'the impractical chequer', but what he sought to replace it with also demonstrated a continued commitment to maximising effectiveness: 'There is no necessity for firing very fast; a cool well-levelled fire, with the pieces carefully loaded, is much more destructive and formidable than the quickest fire in confusion.'⁵² The results of Wolfe's doctrine were clearly demonstrated on the Plains of Abraham in front of Quebec where a French army was once again overwhelmed by the firepower of British infantry. Thus we have evidence of a writer not only sustaining the idea of British superiority in firepower, but arguing that while methodology might change, the objective remained the same and the commitment unwavering.

The influence on the British Army of James Wolfe is also a theme of Reid's *Wolfe*.⁵³ In his preface he states that he will be taking a different approach from Wolfe's earlier biographers because, in order to understand Wolfe's career it is 'necessary to examine the British Army of the mid-18th century'. He adds: 'Consequently this book is as much about the Georgian army and its officers and men as it is about James Wolfe.'⁵⁴ With regard to how the Georgian army fought Reid writes that he has sought to establish, amongst other aspects of the army and Wolfe's career, 'what was the tactical thinking of his [Wolfe's] day and how did he work within its constraints and go on to develop his own, ultimately very influential, ideas about infantry combat'.⁵⁵ From this one might expect a fairly detailed analysis of the nature

⁵² Wolfe, quoted in Brumwell, *Redcoats*, p. 251 and p. 248.

⁵³ Stuart Reid, *Wolfe, The Career of General James Wolfe from Culloden to Quebec* (Staplehurst, 2000).

⁵⁴ Reid, *Wolfe*, p. ix.

⁵⁵ Reid, *Wolfe*, p. ix.

of British infantry tactics and doctrine in the mid-eighteenth century, how they were applied and how they developed and changed.

Reid opens his section on 'Fighting Tactics' with the statement that in the early 1740s when Wolfe began his military career 'British infantry tactics centred almost exclusively around the lethal application of firepower.'⁵⁶ He subsequently gives a fairly superficial description of platoon firing but is rather scathing about its effectiveness, basing his opinion solely on events at Dettingen in 1743. It is to Wolfe that Reid attributes the introduction of alternate firing that replaced the use of firings.⁵⁷ Whilst there is no doubt that Wolfe was an advocate of alternate fire, Reid does not make a compelling case for Wolfe being responsible for its, initially unofficial, adoption. However, Reid does discuss the way infantry tactics and doctrine were developing using Wolfe's instructions to his own battalion as an example. More interestingly, in the light of comments by writers on later periods, to be discussed below, Reid makes a very definite statement about a change in doctrine with regard to the use of the bayonet.

Increasingly during Wolfe's time, British infantry tactics shifted away from platooning to a much more aggressive firing of just one or two big volleys, before charging with the bayonet.⁵⁸

Reid further states categorically that 'it was Wolfe's volley and bayonet tactics, first described in December 1755, which formed the cornerstone of British infantry tactics in the Peninsular War and at Waterloo'.⁵⁹

⁵⁶ Reid, *Wolfe*, p. 109.

⁵⁷ Reid, *Wolfe*, p. 111.

⁵⁸ Reid, *Wolfe*, p. 115.

⁵⁹ Reid, *Wolfe*, p. 200.

The American War of Independence falls outside the scope of this work, but it is worth considering some of the writing about the war for the light it casts on modern views of the preceding periods. The theme of the use of the bayonet is taken up by Matthew Spring in *With Zeal and with Bayonets Only*. In his introduction he writes:

Yet if the purpose of all armies is to fight, and if therefore the most fundamental task facing the military historian is arguably to study combat, it is perhaps ironic that we should still have relatively little detailed analysis of the way in which the respective armies operated on campaign and in action.⁶⁰

He then sets out to demonstrate that ‘the King’s troops won the vast majority of their battlefield engagements in America because they tailored their conventional tactical methods intelligently to local conditions – very much as they had done in similar circumstances during the French and Indian War’.⁶¹ He supports the view of British firepower held by many authors.

Although most foreign commentators probably had a modest opinion of the eighteenth-century British Army as a whole, during the course of the War of the Spanish Succession, the War of Austrian Succession and the Seven Years War, the redcoats earned a reputation for being among the best infantry in the world. This reputation rested largely upon the relative effectiveness of their musketry.⁶²

And again: ‘By the end of the Seven Years War British Infantry regiments had cemented their long standing reputation for being among the most formidable practitioners of fire tactics in Europe.’⁶³ Spring also identifies changes that had taken place in the doctrine of firepower: ‘The replacement of the complicated “platoon fire” system that had been used since Marlborough’s day by the simpler Prussian-inspired “alternate fire” system during the early years of the Seven Years War can only have enhanced the effectiveness of British musketry.’⁶⁴

⁶⁰ Spring, *With Zeal and with Bayonets Only*, p. xi.

⁶¹ Spring, *With Zeal and with Bayonets Only*, p. xii.

⁶² Spring, *With Zeal and with Bayonets Only*, p. 201.

⁶³ Spring, *With Zeal and with Bayonets Only*, p. 214.

⁶⁴ Spring, *With Zeal and with Bayonets Only*, p. 201.

Having established the traditional British doctrine Spring goes on to demonstrate the sudden change from this to a reliance on the bayonet. He explains this as resulting from the tactics of the rebels: 'Early in the war the rebels' predilection for fighting behind hard cover triggered a shift in British infantry tactics from the traditional reliance on fire to speed and shock.'⁶⁵ He then shows that this new tactic was adhered to even when battles were fought in the open. He explains that 'it usually proved unnecessary to engage in costly fire fights to "soften" up rebel troops, most of whom lacked the discipline to repel bayonet rushes with firepower'.⁶⁶

Spring observes that:

few writers seem to be aware that the heavily shock-orientated tactics that the King's troops employed against the rebels were distinctly at odds with contemporary European practice. Moreover when British officers in America strove "to inculcate the use of the bayonet, and a total reliance on that weapon" they were turning their backs on a long-standing British tradition of dependence on fire tactics as the primary element of infantry warfare.⁶⁷

Spring gives an excellent account of tactical doctrine and its development in a particular war. What he does not do is consider what effect, if any, this had on the rest of the British Army not engaged in the American War of Independence, but that is outside the scope of his work.

Spring convincingly establishes the single, effective volley followed by the assault with the bayonet as a tactic that became established during the American War of Independence. In arguing this he is at odds with Nosworthy who claims the

⁶⁵ Spring, *With Zeal and with Bayonets Only*, p. 243.

⁶⁶ Spring, *With Zeal and with Bayonets Only*, p. 244.

⁶⁷ Spring, *With Zeal and with Bayonets Only*, p. 198, quoting J. G. Simcoe, *Simcoe's Military Journal*, (New York, 1844), p. 21.

development for the period of the Napoleonic Wars.⁶⁸ But this also begs the question: is Spring correct in his assessment that a reliance on the bayonet was new? Is it possible that there was a much older, longer lasting doctrine that relied on firepower, of whatever duration required, to soften up an enemy before finishing the combat with a bayonet assault? Reid's suggestion that this adoption of the bayonet took place during Wolfe's time has already been mentioned. Earlier still, Bland in his 1727 *Treatise of Military Discipline* quite clearly gives instructions on when and how a battalion is not to fire by platoons but to give all its fire at once and immediately charge with the bayonet.⁶⁹ He also describes the Dutch method of alternate fire, concluding with 'and when they come up close to the Enemy, they give them their whole fire, as the *English* do'.⁷⁰ Writing in 1755 Wolfe instructed: 'If the battalion is to attack another battalion of equal force, and of like number of ranks, and the country quite open, it is highly probable, that, after firing a few rounds, they will be commanded to charge with their bayonets, for which the officers and men should be prepared.'⁷¹ Since Bland based his writings on the experience of the War of Spanish Succession, and was a major influence on the tactics of the War of Austrian Succession and the Seven Years War, and given the clarity of Wolfe's intentions, one has to consider the possibility that the application of effective firepower followed by an assault with the bayonet, if necessary, was always, during those wars, the British infantry's preferred tactic.

⁶⁸ Nosworthy, *Battle Tactics of Napoleon*, pp. 227-28

⁶⁹ Humphrey Bland, *A Treatise of Military Discipline* (2nd edition, London, 1727), p. 134.

⁷⁰ Bland, *Military Discipline*, p. 146.

⁷¹ James Wolfe, *General Wolfe's Instructions to Young Officers* (2nd edition, London 1780, reprinted 1967) p. 52.

This use of the bayonet by British infantry in the open field is something that Nosworthy does not mention in his book, *The Anatomy of Victory*, which deals with a period of three major wars, the War of Spanish Succession, the War of Austrian Succession and the Seven Years War. He does say that they used the bayonet, 'but only when the enemy being attacked was ensconced in an entrenchment or otherwise-strengthened position'.⁷² He gives two examples, the attack on the village of Blenheim and the storming of the Schellenberg. The Schellenberg in particular was noted for the ferocity of the hand-to-hand combat.⁷³ This suggests that there was no unwillingness to close with the enemy and it is difficult to accept that this could not be transferred to the open battlefield. Chandler in *The Art of Warfare in the Age of Marlborough* also makes no mention of the British making use of bayonet charges. One possible explanation for the overlooking of the use of the bayonet might be the lack of instruction in the manuals on how to fight with it. Houlding observes: 'Bayonet drill was, curiously, rather neglected in the eighteenth century... From Marlborough's campaigns onwards it was the touch-stone of British tactical thinking that heavy fire was all-important; and so it was doctrine perhaps, as much as indifference, that dictated the army's approach.'⁷⁴ Drill, however, does not equate with usage and in the light of this it must be asked if the doctrine, tactics and actions of the British infantry on the battlefields of those three wars have been correctly interpreted.

The evidence provided by the military historians considered here is insufficient to make an assessment of whether or not the doctrine of effective firepower combined

⁷² Nosworthy, *Anatomy of Victory*, p. 110.

⁷³ Spencer, *Blenheim*, pp. 179-85.

⁷⁴ Houlding, *Fit for Service*, p. 261, fn. 10.

with a readiness to close to close quarter combat was applied during the period from the start of the English Civil Wars to the end of the Nine Years War. However, the possibility would seem to exist that this doctrine could extend that far back. For instance, describing infantry combat during the English Civil Wars Sir Charles Firth wrote: 'Usually the musketeers gave a couple of volleys, and then the pikemen levelled their pikes and charged home.'⁷⁵ He makes it clear that the musketeers would also charge, using their muskets as clubs

There is no doubt that, whether writing about a single battle, a particular war or a longer period, the firepower of British infantry is considered by military historians to be at the root of British success on the battlefield. It is also well established by those same historians that throughout this period British infantry enjoyed considerable and sustained success. There were setbacks, such as at Monongahela and Prestonpans, but these were under novel circumstances, which the infantry quickly adapted to and then triumphed over. In the case of Monongahela it has been argued that defeat resulted from a failure to apply current tactical doctrine properly, rather than a failure of the doctrine of firepower.⁷⁶ Following Prestonpans the British infantry dealt very effectively with the Highland charge at Culloden.

There is a wealth of modern published material concerning the firearms used by the British infantry giving detailed technical data including some information on performance, mainly theoretical under test conditions, and also ammunition.⁷⁷ There

⁷⁵ Firth, *Cromwell's Army*, p. 103.

⁷⁶ Stanley Pargellis, 'Braddock's Defeat', *The American Historical Review*, Vol. 41, No. 2 (Jan., 1936), pp. 253-69.

⁷⁷ For example; H. L. Blackmore, *British Military Firearms, 1650-1850* (London, 1961); David F. Harding, *Smallarms of the East India Company, 1600-1859* (London, 1999).

is, however, a lack of information about how these weapons were actually handled at an individual level, how they were loaded and fired. Above the level of the individual soldier and weapon there is also little sound information available about the way that individuals were brought together and drilled and managed on the battlefield in order to maximise the effectiveness of the firepower produced. When this is combined with the incomplete or even inaccurate information published on tactical and doctrinal development it is clear that the traditional view of British infantry dominating battlefields from 1642 to 1815 by the employment of superior firepower, whilst not an incorrect conclusion, is one reached on the basis of perceived performance rather than any deep understanding of how it was achieved.

To summarise the evidence presented by modern historians, it would seem that British infantry firepower was a dominant force on the battlefield during the period under consideration. It is also clear that there is widespread confusion amongst those historians concerning the nature of the underlying tactical and combat doctrine that underpinned that dominance and little understanding, appreciation or analysis of the manner in which it was achieved. Not only is there confusion, but in fact, despite the claims of several historians, there has been little attempt to examine closely and to understand the origins, development, mechanics and management of combat techniques and any underlying tactical doctrine. In the light of this it must be asked if the doctrine, tactics and actions of the British infantry during this period have been correctly interpreted. For instance, it is clear that there is considerable confusion about the relationship between the use of firepower and the use of the bayonet throughout the period under consideration.

In order to identify the development of the tactical doctrine and combat techniques of British infantry through the period from 1642 to 1765, both doctrine and techniques will be analysed to ascertain their effect on the actual combat performance of the infantry. To do this it will be necessary to take a new approach as neither 'old' nor 'new' military history have proved able to tackle the question of how things were done.

Until the founding of the Royal Military College by the Duke of York in 1801 there was no formalised training for officers, a new young officer learnt his trade 'on the job' with his regiment. As Houlding puts it:

With the assistance of brother subalterns or of a senior NCO he learned how to perform the manual and platoon exercises of the firelock or carbine, and the great variety of movements, commands, and posts it was the subaltern's duty to learn, to perform, or to occupy when the unit was carrying on its basic training.⁷⁸

Wolfe considered Bland's *Treatise of Military Discipline* 'indispensible to the military education of young officers'.⁷⁹ This is the knowledge that a junior officer in the British Army required in order to carry out his duties, but many historians endeavour to understand and explain the functioning of the army without a similar level of knowledge. Without this knowledge it is considerably harder to understand why things happened the way they did. This, of course, does not prevent the production of accurate narrative accounts of battles and campaigns, particularly as these tend to be based on the accounts of officers and men who did have the professional knowledge to understand events. Similarly other aspects of military history, such as training, finance, uniforms, equipment, strategy and social history aspects can be

⁷⁸ Houlding, *Fit for Service*, p. 272.

⁷⁹ Stuart Reid, *Wolfe*, p. 133.

effectively addressed without this knowledge. Yet military historians risk misunderstanding or even completely misinterpreting those accounts written by professionals because they do not share the same practical knowledge of how things were done and managed. In turn this gives rise to the danger of drawing incorrect conclusions about tactics and doctrine.

What will be employed in this work is an approach that considers the procedures and practices of soldiers in a given period and analyses those in order understand how things were done and, in turn, why events unfolded as they did. In effect it requires the researcher to acquire a similar level of knowledge to that of, at least, a junior officer of the army under consideration. This practical military history approach provides the understanding of warfare that is required to be sure of correctly interpreting descriptions of events, of understanding not just what happened in a simple narrative way, but why particular actions were executed and why they were, or were not, successful. It allows the historian to be able to judge what courses of action were open but not followed and thus to analyse decision making.

The knowledge necessary to this approach will be gathered by the study and analysis of the drill manuals and similar guides to the conduct of war relevant to the period dealt with in each chapter. Some of these were published and are readily accessible to military historians, although little used or understood. Others exist only in manuscript form. It is by a close analysis of the differences between successive manuals that developments can be identified, although the manuals do not tell the reader why the changes were made or what their effect was. That has to be deduced by understanding what the difference in the words translates into in differences in the

actions of an individual soldier or of a unit. Once that is achieved it becomes possible to analyse descriptions of combat that are to be found in the diaries and letters, published and unpublished, of combatants. This, in turn, allows an assessment to be made of the effectiveness of the doctrine and combat techniques of the infantry, leading to an explanation of how British infantry gained and maintained a battlefield superiority over their enemies.

Between 1642 and 1765 British troops were engaged in six major wars, but it must be remembered that until the Act of Union of 1707 there was no British Army, rather there were two separate organisations, the English Army and the Scottish Army. However, after the English Civil Wars, and particularly following the Glorious Revolution of 1688, this separation was more of a political and financial one than an operational one. As each of the six wars saw its own particular developments and challenges each will be dealt with in turn. In addition, one chapter will address one particular, very important development for British infantry, but one that took place largely elsewhere in Europe, that is the introduction of platoon firing.

The English Civil Wars is the first period of warfare dealt with and it is during that series of wars that a distinctly British tactical doctrine for infantry can first be identified.⁸⁰ This chapter will consider the origins and nature of that doctrine, how it was employed during the Interregnum and after the Restoration of the Monarchy in 1660, and how it subsequently developed only to be briefly abandoned.

⁸⁰ There were three distinct periods of war, 1642 to 1646, 1648 and 1649 to 1651.

The next chapter will deal with the origins of platoon firing. Until now these have been subject to some speculation, but these origins have now been identified, as has the earliest form that it took, which is described and analysed here for the first time. The following chapter will cover the period from the glorious Revolution and through the reign of William and Mary and the Nine Years War, 1688-1697, during which period British infantry were introduced to platoon firing as a way of delivering their firepower, and which was perfectly suited to their tactical doctrine.

Chapter five will cover developments during the War of Spanish Succession, 1701-1714, when the Duke of Marlborough won a succession of battles against the French: Blenheim, 1704, Ramilles, 1706, Oudenarde, 1708 and Malplaquet, 1709. Key developments in the organisation of platoon firing will be identified for the first time and their impact analysed.

Chapter six will show how the long period of peace from 1714 to the outbreak of the War of Austrian Succession, 1740-1748, had a detrimental effect on the infantry's firepower and the consequences of that in the Battle of Dettingen, 1743. Analysis of subsequent battles, Fontenoy, 1745 and Laffeldt, 1747, will show how the infantry recovered from that early difficulty and will establish the effectiveness of the tactical doctrine of the infantry and its application. Analysis of the actions of the Jacobite Rebellion of 1745-1746 and the Battle of Culloden, 1746, will demonstrate the ability of the infantry to adapt to challenge while continuing to adhere to the same underlying doctrine.

Chapters seven and eight will deal with the Seven Years War in Europe and the French and Indian War in North America. Although both part of the same global conflict, these two wars had very different characteristics. In Europe formal, linear battles in open countryside was the norm with the British infantry continuing to seek, and finding ways to further improve the effectiveness of their firepower, concentrating on the practical while in the rest of Europe there was considerable, theoretical debate on the best way to fight. By contrast, the North American theatre presented very different challenges, which were met with different techniques. It will be demonstrated, however, that despite those differences, British infantry in both theatres continued to hold to the same tactical doctrine that had been developed in the seventeenth century.

Throughout this work the term British infantry is used to describe the subject of the work. This is, of necessity, something of a catch-all phrase. As already pointed out, until 1707 there were two separate army establishments in Britain. To further complicate matters, during the eighteenth century many regiments were posted to Ireland, on the Irish Establishment, a political and financial expediency. With regard to the regiments themselves, they contained men of all the four home nations and others. The terms used to describe the soldiers also varied throughout the period under consideration. Regiments of the English Civil Wars consisted of Pike and Shot, that is pikemen and musketeers. During the second half of the seventeenth century the pikeman gradually disappeared and the grenadier appeared. This was a soldier trained and equipped to use hand grenades and who quickly became the elite element of any regiment or army. They were distinguished by their tall mitre caps, not unlike a bishop's cope, and within a regiment they were formed into a single

grenadier company. The men of the other companies wore broad brimmed hats, later cocked hats, and became known as hatmen and their companies as hat companies.

2: The Age of the Matchlock, 1642 to 1688

From 1618 to 1648 most of Europe was embroiled in the Thirty Years War, a war notable for its brutality. Whilst a significant number of individuals from the British Isles took part in this war as volunteers, particularly from Scotland, England and Scotland themselves were not overly involved. The last English military foray into Europe before the Civil Wars, the expedition to the Isle de la Rhe in 1627, was a complete fiasco. Nor were things any better in the Bishops Wars of 1639-40 between England and Scotland when Charles I's English army suffered a humiliating defeat at Newburn in 1640. At the outbreak of Civil War in Britain in 1642 there was no standing army North or South of the border. Neither England nor Scotland could be said to be countries with any sort of military standing. However, by the end of the Civil War Britain had produced an army that in a few campaigns in the 1650s won a considerable reputation amongst European neighbours who had been at war almost continuously since 1618. Fighting with the French against the Spanish in 1658 the English infantry were described as having 'such a reputation in this army that nothing can be more'.⁸¹ This chapter will first examine the development of the application of firepower during the English Civil War and how that contributed to the establishment of that reputation. The second part will examine the development of fire tactics between the Restoration of 1660 and the Revolution of 1688, a period of relative military inactivity, but when it is possible to trace continuing attempts to further improve the ways in which infantry delivered their firepower.

⁸¹ Colonel Drummond to Colonel Monck, 15 June 1658 in C. H. Firth, (ed.), *The Clarke Papers* (London, 1899), Vol. III, p. 154.

The most common firearm of the infantry during the English Civil Wars, and throughout Europe in the mid-seventeenth century was the matchlock musket. In England in 1630 the dimensions of a musket barrel had been set at a length of 48 inches and of 12 bore.⁸² Despite moves in 1639 to introduce a musket with a barrel length of 42 inches this was to remain the standard size of a musket barrel throughout the Civil Wars.⁸³ The procedure for loading and firing a matchlock musket and how to organise and manage formed bodies of musketeers was described in a number of drill books. One of the most popular, running to a total of six editions between 1635 and 1661, was William Barriffe's *Military Discipline*.⁸⁴ The drill contained in Barriffe was based on that developed at the end of the sixteenth century in the Netherlands by Maurice of Nassau and which was to become the universal drill of the Thirty Years War. The full matchlock musket drill as detailed by Barriffe consisted of sixty different movements, each with its own command, of which thirty dealt with the process of loading and firing. The gunpowder was carried in small, cylindrical wooden or tin boxes on a bandolier, usually twelve in number, with each box containing powder for one shot. Part of the complexity of the drill was due to the need to keep separate the powder and the means of igniting it, a length of burning slowmatch. The musketeer in Barriffe's drill was also hampered by a musket rest, used to take the weight of the musket and steady it when firing.

The drawbacks of the matchlock were itemised by the Earl of Orrery when he compared it to the fire-lock or flintlock musket that was in limited use at the time.

⁸² H. L. Blackmore, *British Military Firearms, 1650-1850* (London, 1961), p. 24. Bore size refers to the number of balls that can be made for a firearm from a pound of lead. Thus a 12 bore musket fired a lead ball weighing one twelfth of a pound.

⁸³ Walter M. Stern, 'Gunmaking in Seventeenth Century London', *Journal of the Arms and Armour Society*, Vol. 1 No. 5, p. 64.

⁸⁴ William Barriffe, *Military Discipline: or the Young Artillery Man* (first edition, London, 1635).

For with the Fire-lock musket you have only to Cock, and you are prepared to Shoot; but with your Match-lock, you have several motions [to fire it], the least of which is as long a performing, as but that one of the other, and oftentimes more hazardous; besides, if you Fire not the Match-lock Musket as soon as you have blown your Match, (which often, especially in Hedge Fights, and in Sieges, you cannot do) you must a second time blow your Match, or the Ashes it gathers, hinders it from Firing.⁸⁵

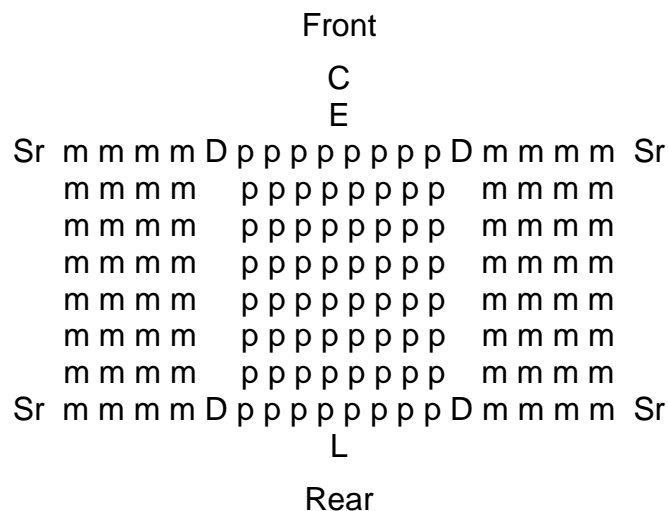
Orrery was describing how the flintlock only required the cock, holding a flint, to be pulled back to full cock for it to be ready to fire. The matchlock, in comparison, required the end of the burning slowmatch to be blown to red hot and free of ash, it was then placed in the serpent or cock of the gun, the priming pan cover was opened by hand and only then could the trigger be pulled to fire the musket. He went on to enumerate the risks posed by the burning match, which could ignite the powder in the soldiers' bandoleers or even in barrels of powder when they were refilling their bandoleers. Added to this the wooden boxes on the bandoleers clattered together noisily, giving away the presence of musketeers at night, and both the match and powder in an open pan were susceptible to the weather. Rain could dampen both causing a misfire and the wind could produce dangerous sparks from the match. With the flintlock pulling the trigger caused the flint to strike sparks and opened the pan instantaneously. With the matchlock there was an inevitable time delay while the priming pan was opened by hand and the trigger pulled to lower the burning end of the match into it. The match itself was a problem as considerable quantities were needed, it attracted moisture thus reducing its viability and it was difficult for soldiers to keep dry.⁸⁶

⁸⁵ Roger, Earl of Orrery, *A Treatise of the Art of War* (London, 1677), pp. 30-31.

⁸⁶ Orrery, *Art of War*, pp. 31-32.

The resultant rate of fire was slow as the musketeer juggled musket, rest, priming flask, match, powder and ball. Some measures were taken to speed things up from the very beginning. On the battlefield soldiers carried musket balls in their mouths and just spat them down the barrel to avoid fumbling for them in the small ball bag on the bandolier and in action the orders given for firing were reduced to just three, 'make ready', 'present' (that is they levelled their muskets at the enemy) and 'fire'.⁸⁷ After firing, reloading was carried out without any further orders. However, in order for a unit of musketeers to maintain a reasonable rate of fire as a unit it was necessary to organise them in a series of ranks that took turns to fire and then reload while the other ranks were firing, the number of ranks depending on the length of time taken to reload. According to Turner the requisite depth was initially ten ranks, Barriffe required eight and for most of the Civil Wars the usual number was six.⁸⁸

Figure 2.1: An infantry company drawn up for drill according to Barriffe.⁸⁹



Key; C = Captain, E = Ensign, L = Lieutenant, Sr = Sergeant, D = Drummer, m = musketeer, p = pikeman

⁸⁷ Henry Hexham, *The First Part of the Principles of the Art Military* (Delft, 1642), pp. 12 and 16.

⁸⁸ Sir James Turner, *Pallas Armata* (London, 1683), p. 216; Barriffe, *Military Discipline* (1635), p. 184; Richard Elton, *The Compleat Body of the Art Military* (London, 1668), pp. 192-93.

⁸⁹ Barriffe, *Military Discipline* (1635), p. 184.

In firing the movements of the musketeers were carefully choreographed and fell into two main types, firing by files and firing by ranks. Barriffe described these and their numerous variations using a single infantry company for illustrative purposes. He showed two small blocks of musketeers in ranks of four with eight men in each file, separated by a central block of eight files of pikemen, each of eight men.⁹⁰ Barriffe's infantry company was equally divided into musketeers and pikemen, although during the Civil Wars the usual ratio was two musketeers to one pikeman.⁹¹

At the outbreak of the Civil War a large number of troops had to be raised and trained quickly by both sides and as a result a number of abbreviated drill manuals were produced that reduced drill down to a practical minimum. From these it is possible to identify which of the many firings detailed by Barriffe and others, such as Ward, were actually considered useful and practical.⁹² In Scotland, General Lesley produced a drill that was subsequently published in London in 1642.⁹³ Like Barriffe he specified files eight deep. Another drill manual claimed to be *A True Description of the Discipline of War* used by the Earl of Newcastle and Prince Rupert.⁹⁴ The drill described in this manual made use of files that were only five deep. Of all the various ways of firing, Lesley's manual only contained one, firing by two ranks advanced, which Newcastle's manual also had, along with firing by files.

⁹⁰ Barriffe, *Military Discipline* (1635) p. 27.

⁹¹ Elton, *Compleat Body*, p. 192-93.

⁹² Robert Ward, *Animadversions of Warre* (London, 1639) pp. 259-76.

⁹³ Anon., *Generall Lessley's Direction and Order for the exercising of Horse and Foot* (London, 1642).

⁹⁴ Anon., *A True Description of the Discipline of War both for Horse and Foot* (no place, no date).

Firing by two ranks advanced was probably the commonest method of firing found in drill books generally and its selection for these two manuals further supports a case for it being the preferred way of firing at the start of the civil wars. In this manoeuvre the front two ranks of a body of musketeers marched forwards ten or twenty paces under the command of a sergeant. The front rank then presented and fired, faced to the left or right and marched in single file to the rear of the body, each man falling in at the rear of his file and reloading. As soon as the first rank was out of the way the second rank fired and then marched to the rear to reload. Once the second rank had fired the third and fourth ranks began to march forward to where the first two had halted to fire, and then fired in their turn. This firing was also carried out without the musketeers advancing, in which case each rank in turn simply stepped forward to the front of the body before firing and filing off to the rear, this was known as firing maintaining ground. If the body advanced slowly while the musketeers fired then each pair of ranks advanced further than the previous pair.⁹⁵

A second method of firing was that of forlorn files, which is found in Newcastle's manual. In this case individual files marched forward as far as required, wheeled to march across the face of the unit and then, by halting and facing the enemy, the file became a rank. After firing each file marched back to its original place to reload. As a variation on this the file could stay as a file and each man in turn fired and marched to the back of the file to reload. Because of the time spent marching forwards and backwards both of these, particularly the latter, produced relatively low volumes of fire.⁹⁶

⁹⁵ Barriffe, *Military Discipline*, (1635), p. 190-95; Elton, *Compleat Body*, p 52.

⁹⁶ Barriffe, *Military Discipline*, (1635), pp. 186-89; Elton, *Compleat Body*, p. 52.

When firing either by ranks or by files there was a three foot gap between both the ranks and the files, which was judged to be the space required by a musketeer to be able to reload safely.⁹⁷ A third method, firing by introduction, required the gap between files to be increased to six feet. The front rank fired and began to reload where it stood. Then the rear rank men marched up through the gaps between the files and placed themselves in front of the front rank to fire. They in turn were followed by the fifth rank and so on until the front rank was at the back and had reloaded. As an alternative the front rank fired and the whole body moved forward, the second rank placing themselves at the front, then the third and so on. As the amount of movement required of each musketeer was less than in the other two methods, this method may have produced a higher rate of fire, but the fire produced was spread over a wider front. Barriffe, however, was critical of it. 'I will not dispute how useful it is; but sure I am, it is over-balanced with danger.'⁹⁸ Although he did not say why he considered it dangerous it is possible that he was concerned about accidents as musketeers with lit match moved between others reloading and also that the less dense formation was more vulnerable to attack.

What was noticeably absent from the pre-war and early war drill manuals was almost any mention of firing in three ranks. This had been developed by Gustavus Adolphus of Sweden and famously and effectively employed at the battle of Leipzig in 1631. It was, however, just one of the ways of firing that the Swedes used. The other

⁹⁷ Barriffe, *Military Discipline*, (1635), pp. 21.

⁹⁸ Barriffe, *Military Discipline* (1635), p. 201.

methods, by files, ranks and divisions were same as described by Barriffe.⁹⁹ There was no lack of opportunity to know about it as number of English and Scottish soldiers served in the Swedish army and details of the battle were widely available through such publications as *The Swedish Intelligencer* and *The Swedish Discipline*.¹⁰⁰ These also contained information on Swedish tactical formations that found its way into the 1639 edition of Barriffe. Barriffe wrote that the Swedes fired by 'salves, powring on showers of Lead, by firing two or three Ranks together', but that is all he says.¹⁰¹ There was no explanation or any instructions on how to carry it out. It was, however, something that would become a trademark of British infantry.

An infantry regiment of the English Civil Wars usually consisted of ten companies, each of pikemen and musketeers although these two different types of soldier did not fight together in their companies. When a regiment was drawn up for battle it was, depending on its strength, formed into one or two battalia. This was a linear formation first developed by Maurice of Nassau at the turn of the century in Holland. A battalia consisted of three divisions of approximately equal size, two of musketeers flanking a central division of pikemen. The divisions of musketeers were in turn organised into sub-divisions of between four to six files, which was the same size as a sub-division of a company's musketeers when drilling as a company. Between each sub-division a gap of six feet was kept for musketeers to march down to the rear of their sub-division.

⁹⁹ William S. Brockington, Jr., (ed.) *Monro, His Expedition with the Worthy Scots Regiment Called Mac-Keys* (Westport CT, 1999, first published London, 1637), p. 322-23.

¹⁰⁰ William Watts, *The Swedish Intelligencer, The First Part* (London, 1632) p. 124; William Watts, *The Swedish Discipline* (London, 1632), pp.80-82.

¹⁰¹ William Barriffe, *Military Discipline: or the Young Artillery Man* (London, 1639), p. 373.

The first major engagement of the English Civil Wars was Edgehill, fought on 23 October 1642. The Parliamentarian army formed in what would become the conventional manner based on the Dutch linear form. The Royalist army formed up according to the far more complex Swedish form, further evidence of knowledge in England of Swedish tactics.¹⁰² However, there is no suggestion in any of the contemporary accounts that the Royalist musketeers employed the Swedish method of firing in three ranks, or *salvee*. This is not surprising as the decision to adopt Swedish tactics was taken on the morning of the battle, leaving no time for instruction and training in the Swedish *salvee*.

A number of eyewitness accounts provide evidence of the performance and effectiveness of musketeers in this battle. One was written by the future James II.¹⁰³ He described how both sides opened fire as soon as they were in range with the royalists advancing firing while the parliamentarians held their ground. Eventually they were so close that hand to hand fighting broke out, however, neither side was able to overcome and defeat the other and a stalemate ensued with both sides firing away at each other until night fell. James II commented that this was

a thing so very extraordinary, that nothing less then so many witnesses as were there present, could make it credible; nor can any other reason be given for it, but the naturall courage of English men, which prompted them to maintain their ground, tho the rawness and unexperience of both partys had not furnished them with skill to make the best use of their advantages.¹⁰⁴

¹⁰² Brigadier Peter Young, *Edgehill, 1642, The Campaign and the Battle* (Kineton, 1967); C. L. Scott, Alan Turton, Dr Eric Gruber von Arni, *Edgehill, The Battle Reinterpreted* (Barnsley, 2004).

¹⁰³ Although only nine at the time of the battle James II had considerable opportunity to talk to other eyewitnesses and as a competent soldier in his adult years he would have understood clearly what he was told. The memoirs were probably commenced after 1660, but writing them continued up to 1685. They appear to have been complete by 1696. A. Lytton Sells, *The Memoirs of James II* (Bloomington, 1962), pp. 13-23.

¹⁰⁴ Rev. J. S. Clarke (ed.), *The Life of James the Second King of England, etc, collected out of memoirs writ of his own hand* (London, 1816), vol. I, p. 12.

Neither side had the skill or experience to overcome the resistance of the other, the firing was sustained, but not sufficiently effective as to bring about a conclusion to the combat.

Elsewhere at Edgehill the insufficiency of firepower left infantry vulnerable when cavalry acted in unison with infantry. A Parliamentarian account described the effect of a cavalry and infantry attack on Royalist infantry.

But their foot...came up all in Front...that part of it which was on their Left, and towards our Right Wing, came on very gallantly to the Charge, and were as gallantly received, and Charged by Sir Philip Stapleton and Sir William Balford's Regiment of Horse, assisted with the Lord Robert's, and Sir William Constable's Regiments of Foot, who did it so home thrice together, that they forced all the Musqueteers, of two of their left Regiments, to run in and shrowd themselves within their Pikes, not daring to shoot a shot.¹⁰⁵

The account of James II also recorded these events, claiming that the royalist regiments 'were not broken by this charge, yet they were put into some disorder'.¹⁰⁶ However, it is further evidence that infantry alone were not able to overcome other infantry.

Both James II's and the Parliamentarian accounts, written by a number of senior officers, described the battle petering out as night fell and ammunition ran out. 'After this neither party press'd the other, but contented themselves to keep their ground, and continued firing, till night put an end to the dispute.'¹⁰⁷ 'By this time it grew so late and dark, and to say the truth, our ammunition at this present was all spent.'¹⁰⁸

The accounts of the battle make it clear that both sides had suffered problems with ammunition running out. Barriffe made no mention of any arrangements for the

¹⁰⁵ Young, *Edgehill*, p. 307.

¹⁰⁶ Clarke, *James II*, p. 14.

¹⁰⁷ Clarke, *James II*, p. 14.

¹⁰⁸ Young, *Edgehill*, p. 308.

resupply of ammunition, or how it was to be managed except in his description of Swedish formations. Here he simply wrote that the musketeers to the rear of the formations were there 'either to guard the Baggage or Cannon, to be Convoyes to bring ammunition or victuals to the rest; or to continue a reserve to waite upon all occasions'.¹⁰⁹ Elton simply echoed Barriffe when he wrote that regiments should have 'always in the Reer a sufficient number of Muskettiers for the guard of the Baggage, Cannon, or to be Convoys for to convey Ammunition and Victual to the rest of their fellows'.¹¹⁰ It is clear that there were attempts at Edgehill at resupply, a Royalist soldier 'in fetching Powder (where a Magazin was) clapt his Hand carelessly into a Barrel of Powder, with his Match lighted betwixt his Fingers, whereby much Powder was blown up, and many kill'd'.¹¹¹ The inability of either side effectively to resupply their infantry with ammunition during a battle further hampered attempts to achieve a decision through the use of firepower.

Whilst the precise details of the sequence of events at Edgehill continue to be debated there is no doubt that the outcome was inconclusive. This is due in no small part to the inability of the infantry of either side to achieve outright success on their own. The accounts of the battle suggest not only that there were prolonged firefights, to the extent that ammunition ran low or ran out on both sides, but also that these were conducted in such a manner that they failed to achieve a decision. There is little doubt that the Parliamentarian infantry attained a degree of superiority over the Royalists, but not sufficient to break them.¹¹²

¹⁰⁹ Barriffe, *Military Discipline* (1639), p. 371.

¹¹⁰ Elton, *Compleat Body*, p. 139.

¹¹¹ Sir Richard Bulstrode, *Memoirs and Reflections upon the Reign and Government of King Charles the 1st and K. Charles the 2^d* (London, 1721), p. 84.

¹¹² Scott et al, *Edgehill*, pp. 118-24.

This leads to the conclusion that the fire delivery methods used at the beginning of the Civil Wars and at Edgehill, firing by ranks advancing and firing by forlorn files, were not capable of generating sufficient firepower to force a conclusion in a firefight or cause sufficient disruption to ensure success in hand to hand combat. In addition the ability to generate sufficient firepower to achieve victory was hampered by the amount of ammunition available, usually twelve rounds a man. In the aftermath of Edgehill there is an absence of evidence of any discussion of the methodology of delivering infantry firepower, or of any orders or instructions to change, by either side. It is necessary to look at the actions that followed Edgehill for evidence of change and increased effectiveness.

Just over two weeks after Edgehill, Charles I made an abortive advance on London that ended with the stand-off at Turnham Green, the closest he got to recovering the capital. During his advance there was a small but bloody skirmish at Brentford. The Royalist John Gwynne describes how the assault on the Parliamentary forces in Brentford drove them 'to the open field, with a resolute and expeditious fighting, that after once firing suddenly to advance up to push of pikes and the butt end of muskets, which proved so fatal to Holles and his butchers and dyers that day'.¹¹³ The key words here are 'resolute and expeditious', suggesting that the tactics used were intended to force a conclusion. Gwynne also recorded that at the second battle of Newbury in 1644 one Royalist regiment received orders 'not to give fire upon the enemy until they came within a pikes length of him'.¹¹⁴ Whereas at Edgehill the

¹¹³ John Gwynne, *Military Memoirs of the Great Civil War* (Edinburgh, 1822) p. 24.

¹¹⁴ Gwynne, *Memoirs*, p.55.

infantry had begun to fire once within musket range they now began to reserve their fire until the range was minimal, both on the offensive, as at Brentford, and on the defensive as at Newbury. At the battle of Cheriton in 1644 Slingsby recorded how Royalist infantry fought off a cavalry attack, 'the foote keeping their ground in a close body, not firing till within two pikes length, and then three ranks at a time, after turning up the butt end of their muskets, charging their pikes, and standing close, preserv'd themselves and slew many of the enemy'.¹¹⁵ This event not only demonstrates fire being held to a minimal range, but that musketeers were able to see off cavalry, in contrast to events at Edgehill.

Precisely how this change in combat technique came about is uncertain. Using a Swedish formation for the Royal Army at Edgehill was a suggestion that had originated with the Patrick Ruthven, Earl of Forth, who had fought under Gustavus Adolphus. It is possible that the impetus for the change came from Scottish officers in Charles' army who had served in the Swedish army. The descriptions of subsequent combat are similar to the description of Swedish infantry attacking other infantry at Breitenfeld in 1632. A Scottish officer there described how he reserved his fire until within pistol shot, fired just two volleys, each of three ranks, and then immediately attacked with musket butt and sword, defeating the enemy.¹¹⁶

These developments can also be seen amongst Parliamentary infantry. At the successful storming of Arundel in December 1643, by Sir William Waller's

¹¹⁵ Charles E. H. Chadwyck Healey (ed.), *Bellum Civile, Hopton's Narrative of his Campaign in the West* (London, 1902) p. 102. It should be noted that the phrase 'charging their pikes' means to bring it horizontal to the position for combat, not that an assault was made against someone's pikes. The word charge at this time is also frequently used to mean delivering fire, just as loading can be referred to as charging a firearm and an individual load is referred to as a charge.

¹¹⁶ William Watts, *The Swedish Discipline, Religious, Civile and Military* (London, 1632), p. 24.

Parliamentarian army, Colonel Birch, having crossed the Royalist's first line of fortifications, received a counter-attack. The account of what happened was written by Birch's secretary and addressed directly to him.

At this instant, the enemy spending their shot at too great a distance, your order was to horse and foote instantly to assault the enemy; your selfe with cheerfull speech assureing they would not stand, which proved accordinglie. For the enemy, feeling the force of shott poured on them with three ranks at a time, after short time gave ground, and your selfe entered the towne with them.¹¹⁷

It is also interesting to note that the enemy was considered to have fired at too great a range.

At the First Battle of Newbury, 1643, the Blew Regiment of the London Trained Bands was attacked by two regiments of Royalist cavalry. What happened was described by a Sergeant Foster in the Red Regiment. 'Two regiments of the Kings Horse which stood upon their right flanke a far off, came fiercely upon them, and charged them two or three times, but were beat back with their Muskettiers, who gave them a most desperate charge, and made them flie.'¹¹⁸ Foster's own regiment was similarly attacked.

Then two regiments of the enemies horse, which stood upon our right Flank, came fiercely upon us, and so surrounded us, that we were forced to charge upon them in the front and reere, and both Flanks, which was performed by us with a great deal of courage and undauntedness of spirit, insomuch that wee made a great slaughter among them, and forced them to retreat'.¹¹⁹

These accounts suggest that after Edgehill there was a fairly immediate and dramatic change in the way that first the royalist infantry and then the

¹¹⁷ Rev. John Webb (ed.), *Military Memoir of Colonel John Birch* (London, 1873), p. 8.

¹¹⁸ Henry Foster, *A true and exact Relation of the Marchings of the Two Regiments of the Trained-Bands of the City of London* (London, 1643), np.

¹¹⁹ Foster, *A true and exact Relation*, np.

parliamentarian infantry delivered their fire. Fire was reserved to a range of the length of a pike or two, which is five to ten metres, and then delivered by three ranks firing together. In the case of infantry on the offensive this was followed by an immediate assault. This change proved effective not only in the case of attacking other infantry, but also defensively against cavalry.

In Yorkshire the Parliamentarian forces were commanded by Lord Fairfax and the infantry, in contrast to other Civil War armies, seem to have mainly consisted of musketeers.¹²⁰ Why Lord Fairfax's infantry was mainly made up of musketeers is not known, however many of the battles and skirmishes fought in the north of England were characterised by the presence of enclosures and hedges. It might simply be that these would hamper attempts by pikemen to close to hand to hand combat and consequently more reliance was laid on musketry. Whatever the explanation, the experiences of this army can demonstrate both the strengths and weaknesses of firepower during the Civil War. At the battle of Adwalton Moor in June, 1643, Fairfax's infantry seems to have totalled some four thousand musketeers. In contrast the Royalist army commanded by the Earl of Newcastle had about the same number of infantry, but only half were musketeers, the rest being pikemen.¹²¹ The Royalists had a considerable advantage in cavalry.¹²² Initially the Parliamentarian musketeers, fighting from hedge to hedge and through enclosures, gradually gained the upper hand. Newcastle started to give orders to retreat, but at this point the Royalists launched a counter attack with a large body of pikemen that turned the tide of the

¹²⁰ Anon., *An Express Relation of the Passages and Proceedings of His Majesties Armie, under the command of his Excellence the Earle of Newcastle* (1643), p. 2.

¹²¹ Margaret, Duchess of Newcastle, *The Life of...William Cavendish ...Earl of Newcastle* (London, 1667), p. 30.

¹²² Dave Cooke, *The Forgotten Battle – Adwalton Moor* (Heckmondwike, 1996) pp. 20-21.

battle. The reason for the success of this body of pikemen in amongst hedges and enclosures and against musketeers is not clear. The most likely explanation comes from Joseph Lister.

But there was one major Jefferies keeper of the ammunition, who proving treacherous, and withholding it from the parliament men; who calling for it and being able to get none, were forced to slacken their firing, which the enemy perceiving, and very likely having private intelligence of, presently faced about, and fell upon Fairfax's men with that fury that they soon regained their guns, and put them to the rout, slaying many of them.¹²³

How the musketeers delivered their fire in this battle is not clear from the accounts. However, what is clear is that the Parliamentarian musketeers were able to achieve superiority over their opponents and to neutralise any threat from the Royalist pikemen while they had an adequate supply of ammunition. It also suggests that a system for resupplying ammunition in battle was in place, but on this occasion broke down. A similar event happened at the battle of Tadcaster in December of 1642 when after successfully holding off Newcastle's forces Fairfax was forced to withdraw under cover of night for want of ammunition.¹²⁴ Whether or not there was treachery at Adwalton, these incidents do emphasise the importance of the supply of ammunition and the difficulty of resupply on the battlefield.

As with Adwalton, other accounts of the fighting in the north of England provide little evidence of how the musketeers from this region fought. They are commonly described as fighting from hedge to hedge, which may indicate that firepower alone was frequently relied on, with little hand to hand combat. Although there is no

¹²³ Joseph Lister, *An Historical Relation of the Life of Mr Joseph Lister* (Bradford, 1821) p. 13.

¹²⁴ Robert Bell (ed.), *Memorials of the Civil War, comprising the Correspondence of the Fairfax Family* (London, 1849), vol. I, p. 28.

indication of how that fire was delivered, without the option of hand to hand combat to finish off an opponent already shaken in a firefight, the firepower element alone had to have been effective enough to decide the outcome. The Parliamentarian musketeers at least were capable of holding their fire in defence in order to produce decisive firepower. At Tadcaster Sir Thomas Fairfax recorded how 'Our Men reserv'd their shot, till they came near, which they did then dispose of to so good purpose, that the Enemy was forced to retire, and shelter themselves behind the Hedges.'¹²⁵ They were, however, also involved in the storming of a number of towns, where hand to hand combat is implicit in the accounts. At the storming of Leeds 'The business was hotly disputed for almost two Hours; but the Enemy being beaten from their Works, and the Barricado's into the Streets forced open, the Horse and Foot resolutely entered, and the Soldiers cast down their Arms, and rendered themselves Prisoners.'¹²⁶ At the storming of Wakefield Sir Thomas Fairfax recalled that 'after an Hour's dispute, the Foot forced open a Barricado, where I entered with my own Troop'.¹²⁷ From this it would appear that while the nature of the terrain in the north of England affected the way battles were fought there was an understanding of the need for musket fire to be delivered at close range in order to produce effective firepower and that this had to be combined with a readiness to engage in hand to hand combat to achieve a decision when necessary.

Unfortunately there is little evidence concerning the performance of Lord Fairfax's infantry at the battle of Marston Moor in 1644, after an initial success they mostly ran away. Five armies were engaged in that battle, which followed the raising of the

¹²⁵ Sir Thomas Fairfax, *Short Memorials of Thomas Lord Fairfax* (London, 1699), pp. 9-10.

¹²⁶ Fairfax, *Short Memorials*, p. 16.

¹²⁷ Fairfax, *Short Memorials*, p. 30.

siege of York. There were two Royalist armies, The Earl of Newcastle's, which had been defending York, and Prince Rupert's, which had raised the siege. Opposed to them were the two Parliamentarian armies of Lord Fairfax and The Earl of Manchester, and, allied with the Parliamentarians, a Scots army, that had all been besieging York.¹²⁸ What is evident about Marston Moor is that it was a particularly bloody affair. It lasted only an hour and a half, perhaps two, but well over four thousand were killed, mostly Royalist infantry. The language of the accounts reflects this ferocity and violence. One of Cromwell's officers described 'thinking the victory wholly ours and nothing to be done but to kill and take prisoners'.¹²⁹ Another eyewitness of many battles wrote: 'This victory was one of the greatest and most bloody since the warre begane.'¹³⁰ These comments, the high casualties and the brevity of the battle when compared to Edgehill could be a reflection of the change in infantry fire tactics since the start of the war.

At one point in the battle, part of the Scots infantry came under considerable pressure. The cavalry of the Royalist left wing 'assaulted the Scottish Foot upon their Flancks, so that they had the Foot upon their front and the whole Cavalry of the enemies left wing to fight with, whom they encountered with so much courage and resolution, that having enterlined their Musquetiers with Pikemen they made the enemies Horse, notwithstanding for all the assistance they had of their foot, at two severall assaults to give ground'.¹³¹ The significance of this description is that this appears to be one of only two instances of infantry interlining pikemen and

¹²⁸ Brigadier Peter Young, *Marston Moor, 1644, The Campaign and the Battle* (Kineton, 1970); P. R. Newman and P. R. Roberts, *Marston Moor, 1644, The Battle of the Five Armies* (Pickering, 2003).

¹²⁹ Lionel Watson, *A More Exact Relation of the Late Battell Neer York* (London, 1644), p. 6.

¹³⁰ C. H. Firth, 'Marston Moor', in *Transactions of the Royal Historical Society, New Series, vol. XII* (London, 1898), p. 75.

¹³¹ Captain William Stewart, *A Full Relation of the Late Victory...* (London, 1644), p. 8.

musketeers to defend against cavalry, the other being at Edgehill. The general response to a cavalry attack seems to have been to deliver close range volley fire sufficient to drive off, or at least halt the cavalry's attack. Once cavalry have stopped moving they are, as individuals, vulnerable to the infantry who will almost always have greater numbers.

In Scotland evidence of similar fire tactics to those developed in England can be found. At the battle of Tippermuir in 1644, Montrose, the Royalist commander, was facing a larger enemy and was in danger of being outflanked. He instructed his infantry accordingly.

He caused his Army to be drawne out to as open an order as could be possible, and makes his Files onely three deep. He commands the Ranks all to discharge at once, those in the first Ranke kneeling, in the second stooping, and in the hindmost, where he placed the tallest men, upright; he chargeth them also to have a care of mis-spending their powder, of which they had so small store, and that they should not so much as make a shot till they came to the very teeth of their enemies; & as soone as they had discharged their muskets once a piece, immediately to breake in upon the enemy with their swords & musket ends; which if they did, he was very confident the enemy would never endure the charge.¹³²

Whilst six ranks were necessary for sustained fire three ranks were the maximum that could be fired together in a single volley. Montrose has here made a virtue of necessity, the three deep line firing in a single volley at close range maximising the fire of his infantry while also extending his line to avoid being outflanked and conserving powder by avoiding a prolonged musketry engagement. The delivery of the fire was then to be followed by an immediate assault. The result was a victory for Montrose.

¹³² George Wishart, *The History of the Kings Majesties Affairs in Scotland* (The Hague, 1647) p. 39.

At the battle of Inverlochy, 1645, the Royalist left wing of Montrose's army was commanded by Colonel Occaen. He ordered his musketeers to hold their fire to close range, which they did, ignoring the enemy's fire until 'they fyred there beardes', which made 'a cruell havoke'. They then promptly attacked with their swords and targes, disordering and dispersing the enemy.¹³³ Here again the fire was maximised by firing at very close range, followed by an immediate assault. Again, these tactics resulted in a Royalist victory. It would appear that the adoption of developing maximum firepower at close range followed a rapid assault was a nationwide development.

The battle of Naseby, fought in 1645, provided clear evidence of the use of both brief, short range volleys in the assault and the use of lower intensity firing when the situation required it. The Royalist army, led by Charles I in person, took the offensive although outnumbered, and marched towards the Parliamentary army, the newly raised New Model Army commanded by Sir Thomas Fairfax. In the centre the position of the Parliamentary infantry, drawn back from the edge of a slight ridge, meant that the infantry regiments lost sight of each other as they closed. The Royalist Sir Edward Walker wrote: 'The Foot on either side hardly saw each other until they were within Carabine Shot, and so only made one Volley; ours falling in with Sword and butt end of the Musquet did notable Execution.'¹³⁴ According to the Parliamentary John Rushworth 'the Foot charged not each other till they were within twelve paces one of another, and could not charge above twice, but were at

¹³³ Patrick Gordon of Ruthven, *A Short Abridgement of Britane's Distemper* (Aberdeen, 1844), p. 101.

¹³⁴ Sir Edward Walker, 'Brief Memorials', in Peter Young, *Naseby 1645* (London, 1985), p. 318.

push of Pike'.¹³⁵ If the Royalists fired a single volley before closing to hand to hand it seems likely that they had reduced their musketeers from six ranks to three. To stay in six ranks would have meant the rear three ranks could not have fired, a considerable waste of fire power. Additionally, going into three ranks would have lengthened the frontage of the Royalist units, thus better matching the frontage of the numerically superior front line of the New Model Army. The New Model Army was formed on a constricted front and with little space between the front line regiments would not have been able to copy the Royalist formation.¹³⁶ It is possible that the New Model fired by three ranks twice, thus producing the two 'charges' or vollies recorded by Rushworth. Clearly both armies were capable of and prepared to use firing in three ranks at close range to maximise their firepower immediately before hand to hand combat.

During the battle the New Model Army's infantry commander, Major General Skippon, was shot at close range, apparently 'by one of his own Souldiers in wheeling off'.¹³⁷ This seems to have occurred at a point after the initial contact and when Skippon was bringing forward reserves to counter the Royalist's initial success, most likely during the period of an extended exchange of fire suggested by archaeological evidence.¹³⁸ If that was the case it would appear that firing by ranks was in use at this point, presumably because the Royalists had run out of momentum and the New Model Army was recovering from its initial setback. Neither side was in a position to try to force the issue and so both resorted to low intensity,

¹³⁵ John Rushworth, 'Letter', in Glenn Foard, *Naseby, The Decisive Campaign* (Whitstable, 1995), pp. 403-05.

¹³⁶ Martin Marix Evans, *Naseby 1645, The Triumph of the New Model Army* (Oxford, 2007), pp. 58-59.

¹³⁷ Richard Collings, *The Kingdomes Weekly Intelligencer, 24 June to 1 July* (London, 1645), p. 847.

¹³⁸ Foard, *Naseby*, p. 263.

but sustainable firing. Ultimately the New Model was victorious and Naseby was followed by a series of successes as it campaigned from Northamptonshire to Cornwall, finally bringing the First Civil War to an end at Oxford in 1646.

The tactics used by the New Model Army and their capability with them are summed up in a letter written by Cromwell about the battle of Preston during the Second Civil War fought in 1648. 'There came no band of your foot to fight that day but did it with incredible valour and resolution...they often coming to push of pike and close firing, and always making the enemy to recoil.'¹³⁹

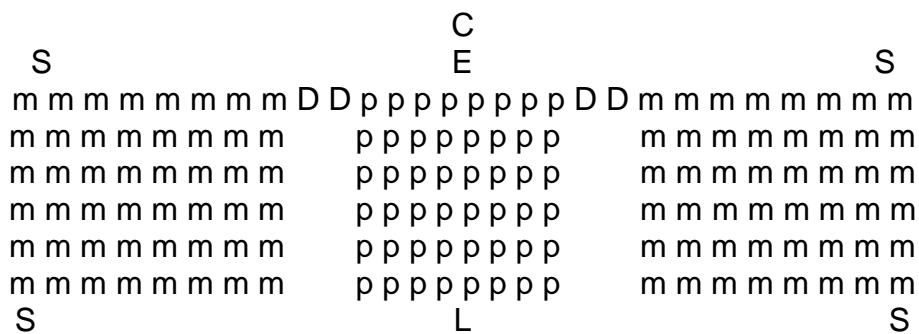
There are few descriptions of English Civil War engagements that are sufficiently detailed to allow an analysis of how firepower was delivered and how that delivery developed. Many speak of hedge fights and driving the enemy from hedge to hedge, but without any explanation of the techniques involved. Many engagements were protracted affairs, which raises questions about the supply and conservation of ammunition in battle. However, some further evidence of changes in the way fire was delivered can be found by comparing the military manuals of William Barriffe and Richard Elton, Barriffe being pre-war and Elton post-war. Elton described much the same firing manoeuvres as Barriffe, but based his descriptions on a company with a 2:1 ratio of musketeers to pikemen and files six men deep, rather than Barriffe's 1:1 in files eight deep, which indicates that there had been both an increased reliance on firepower and an increased rate of fire. He prefaced his descriptions with a comment on the variety of firings suggesting that not all of them were considered to be practical for the battlefield.

¹³⁹Thomas Carlyle, *Oliver Cromwell's Letter and Speeches* (London, 1849, 2nd Ed.), p. 347.

I shall therefore for the good of my Country, and for the benefit of all such as are herein concerned, collect forth some firings, which shall be every one differing from the other in one kind or other, either in the execution or reducing, whereby the ingenious Souldier may cull forth such as he best likes to make use of, what he shall think to be most fit and pertinent to his intended purpose, be it either for delight or service.

He then went on to describe forty five different ways of firing that do not differ from Barriffe except in the number of ranks.¹⁴⁰

Figure 2.2: An infantry company drawn up according to Elton.¹⁴¹



C = captain, L = Lieutenant, E = Ensign, S = Sergeant, D = Drummer, m = Musketeer, p = Pikeman

However, while the main body of his text remained unaltered, Elton made an important addition to the second edition of his book in 1659. This amounts to four unnumbered pages added to the very end. First he gives the drill movements for the matchlock musket without the musket rest. In doing so he was reflecting a change that came about during the wars, which was the rest's abandonment. It is difficult to be sure when this happened, it was probably a gradual, piecemeal process, but when the New Model Army was being fitted out in the winter of 1644-1645 no musket rests were supplied to it. This change undoubtedly speeded up the process of loading a musket as the musketeer had one less piece of equipment to juggle. It may

¹⁴⁰ Elton, *Compleat Body*, p. 52-54.

¹⁴¹ Elton, *Compleat Body*, p. 16.

also indicate that muskets had become lighter, although there is no evidence to suggest that the design of muskets changed during the wars.

Elton also wrote in this section 'I have thought good to set down the plain way of exercising a company, as usually it is practised in the Army', that is during the 1650s.¹⁴² He wrote:

'We usually fire in the Front sometimes two Rancks standing, the rest passing by turns, then standing after they have gained the ground before their Leaders do fire, till all have fiered twice; other times three Rancks fire together the first kneels down, the second stoops; the third stands upright, then falling down, the three last Rancks pass through; and do the like.'

Whether firing one, two or three ranks the idea of ranks filing off down the side of their unit to the rear to reload seems to have been abandoned. Instead all the firing appears to have been by introduction with musketeers moving in the gaps between files. Furthermore the musketeers reloaded where they fired while the musketeers who were loaded moved past them, further reducing the loading time. These then stood and fired immediately in front of those who had just fired, there was no advancing ten or twenty paces to fire, which reduced the time between volleys. Elton also seems to be saying that the distance between the files of musketeers was 'order', half that stated by Barriffe as necessary for firing by introduction. This would have had the effect of concentrating the fire over a narrower frontage.¹⁴³ What is just as important is what is not there. Firing by two ranks advanced and by forlorn files have disappeared. Instead the firing by ranks was carried out in a much brisker manner and the aggressive firing by three ranks had become normal practice.

¹⁴² Elton, *Compleat Body*, (1659), np.

¹⁴³ Elton, *Compleat Body*, (1659), np.

While the developments in firing methods enumerated by Elton in his 1659 edition appear to have increased the rate of fire of a body of musketeers he did not approve of all attempts to do so. He was insistent 'that the Souldiers present and give fire upon their Rests, not using that slovenly posture of popping their Matches into the Pan, their Muskets being on their left sides, which is not only hurtful unto themselves, but much endangers their fellow-Souldiers, and by so doing they scarce or ever do any execution against an Enemy'.¹⁴⁴ Elton did not mean that the soldiers had the muskets on the left side of their bodies, but rather that the muskets were held with the left side of the musket downwards. The advantage of this was that it ensured the powder in the priming pan was over the touchhole and thus made ignition of the main charge more certain. That Elton was railing against a widespread practice is supported by an account from the far west of Wales. Here the Parliamentary commander, Major-General Laugherne had been reinforced by some troops from Ireland. The actions of these troops were described in a skirmish near Carmarthen in 1645. In the account they are described as 'English, Irish foot as had somewhat before fled out of Ireland' and then simply as 'Irish'. This is to distinguish them from other Parliamentary infantry and does not mean that they were of Irish nationality. 'The Enemy very Souldier-like, had a forehead lined the hedges on the high-ways, and approaches to the Towne, with store of Musketeers, which the Irish foot, with other seconds, beate from hedge to hedge, firing in a new dexterity, with their matches lighted in their hands, charging the enemy twice for

¹⁴⁴ Elton, *Compleat Body*, p.54.

once, which they performed with much agility.¹⁴⁵ Elton, however, seems to be making the case that rapid fire did not necessarily equate with effective fire.

From the information that can be gleaned from the myriad accounts of battles and skirmishes and from the few drill manuals some conclusions may be drawn about the application of firepower during the English Civil Wars and how it changed during that period. After Edgehill there was a rapid move away from relatively slow and low intensity fire sustained over long periods of time to delivering fire in sharp close range bursts followed by an immediate assault. Not only was this more decisive, frequently in favour of the aggressor, but it also conserved ammunition while maximising effectiveness. At the same time the ability to maintain low intensity, sustained fire was retained. Although not a battle winner it still had a role to play. That there were measures employed to resupply musketeers during a battle is evidenced by comments concerning the use of reserve musketeers to bring up ammunition and the numerous occasions when careless musketeers blew themselves up when replenishing their powder.

The test of these developments came during the 1650s and 1660s when English infantry found themselves pitted against foreign infantry who had the benefit of experience gained during the European-wide Thirty Years War. At the battle of the Dunes in 1658 they found themselves allied to the French and fighting the Spanish. The English were posted on the left flank of the French army and were opposite a large force of Spanish infantry posted on the top of a large sand hill. Lt. Col. Hughes

¹⁴⁵ Gil: Batt., *Some Particular Animadversions of Marke, for the satisfaction of the contumacious Malignant...* (London, 1646) p. 25-26.

described how the English infantry 'on hands and knees crept up the hill, and gave the enemies foote two good volleys, and with our pikes forced them to retreat'.¹⁴⁶

Morgan, commanding the infantry, described the result of the attack: 'Immediately the enemy were clear shocked off their ground, and the English colours flying over their heads, the strongest officers and soldiers clubbing them down.'¹⁴⁷ The battle was a complete victory for the Anglo-French army. From Hughes' account it would appear that the infantry fired two three rank volleys, just as described by Elton.

Another view of the hand to hand combat at the Dunes comes from the future James II who was commanding an exiled English Royalist army fighting for the Spanish. He led a frontal cavalry charge against Lockhart's regiment, but was repulsed with considerable losses.¹⁴⁸ Shortly after this he led another desperate cavalry charge against Lockhart's. This time he attacked them in the flank and broke into the regiment.

Tis very observable that when wee had broken into this Battalion, and were got amongst them, not so much as one single man of them ask'd quarter, or threw down his armes; but every one defended himself to the last: so that wee ran as great danger by the butt end of their muskets, as by the volley which they had given us. And one of them had infallibly knock'd me off from my horse, if I had not prevented him when he was just ready to have discharg'd his blow, by a stroke I gave him with my sword over the face, which layd him along upon the ground.¹⁴⁹

James' attacks against Lockhart's were ultimately futile, and did nothing to prevent a French victory, but they did demonstrate the ability of English infantry to defend themselves, in line against cavalry attacking them frontally. An attack from the flank, however, was something that would continue to be a threat to infantry in line.

¹⁴⁶ C. H. Firth (ed.), *The Clarke Papers* (London, 1899), p. 158.

¹⁴⁷ Major-General Morgan, *A True and Just Relation of Maj. Gen. Sir Thomas Morgan's Progress in France and Flanders* (London, 1699), p. 9.

¹⁴⁸ A. Lytton Sells (ed.), *The Memoirs of James II* (Bloomington, 1962), p. 265.

¹⁴⁹ Lytton Sells, *James II*, p. 266.

Following the restoration of the Monarchy Charles II sent a small force, many of whom were New Model Army veterans, to Portugal to help in the struggle for independence from Spain.¹⁵⁰ Colonel James Apsley gave an account of the actions of the English infantry at the Battle of Ameixial in 1663.

The English marched on shouting as if victorious, but discharged no shot till they came within push of pike of the enemy, and then they poured in their shot so thick upon them that made them quit their ground and fly towards the left wing, leaving their cannon behind them, which were afterwards turned upon them, much to their prejudice. Notwithstanding the rich baggages and coaches and wealthy plunder which were on top of the hill – the English seeing the field not cleared – there was not one man of them stirred out of his rank, but kept close serried together to prevent any second onset, which immediately followed, for they were assaulted front, flank and rear by divers of the enemy's troops of horse, but having their fire ready at all hands, they quickly quitted themselves of those troops.¹⁵¹

This account offers nothing new in terms of combat doctrine for English infantry, the infantry fire is delivered at a typically close range and a counter-attack by cavalry is driven off in typical fashion. The interest lies in the reaction of other Europeans to this action. The King of Portugal 'acknowledged that in this year's great defeat 1663 he gave Don John of Austria near Eborá, that Brigade of English who served there, though not much considerable in number, did perform the toughest part of the service, and first shewed them the way of using the Rests of the Musquet to knock down the Enemy; which made the French-men cry out, *Faisont comme les anglois*, Let's do as the English'.¹⁵² The King's generals 'having not been accustomed to see so close an approach before firing, did give up the English for lost and did believe

¹⁵⁰ John Childs, 'The English Brigade in Portugal, 1662-68', *Journal of the Society for Army Historical Research*, Vol. LIII, No. 215, (1975), p. 136.

¹⁵¹ Historic Manuscripts Commission, *The Manuscripts of J. M. Heathcote Esq.* (London, 1899), p. 104.

¹⁵² James Howell, *Proedria vasilike a discourse concerning the precedency of kings* (London, 1664), p. 38. The reference here to musket rests is probably a reference to the musket stocks and using them to club down the enemy rather than to the forked musket rest for taking the weight of the musket and which had gone out of use during the English Civil War.

they all had intended to joined with the Castillians, but when they saw their thick firing and the good success the English obtained thereupon, they called us comrades and good Christians'.¹⁵³

The implication of these comments, particularly from Portugal, was that the English were doing something new that European enemies could not cope with and which very quickly gained them a considerable reputation. What that would appear to be was, firstly, their particularly effective and aggressive use of firepower that required the soldiers to ignore enemy fire and hold their own fire until they had closed to a range of five to ten yards when they would deliver one or two devastating vollies, depending on whether they were in three ranks or six. The effect on the enemy of the realisation that they had fired but that the English had not and were still advancing must have been considerable. Conversely, English infantry was encouraged if the enemy fired too soon or inaccurately, as with Birch's men at Arundel. At the battle of Preston John Hodgson recorded how 'the enemy let fly at us (a company of Langdale's men that was newly raised). They shot at the skies, which did so encourage our men, that they were willing to venture upon any attempt'.¹⁵⁴

Secondly, this aggressive firepower was combined with a willingness, if not eagerness, to close to hand to hand combat immediately after firing and to club down their opponents with their muskets. This eagerness was evident at the Battle of the Dunes when the English infantry cheered at the sight of the enemy and the prospect of the fight, something that seems to have surprised Marshal Turenne, the

¹⁵³ H. M. C., *Heathcote Manuscripts*, p. 104.

¹⁵⁴ Capt. John Hodgson and Sir Henry Slingsby, *Memoirs written during the Great Civil War* (Edinburgh, 1806), p. 116.

French commander.¹⁵⁵ However, that did not mean that they were incapable of less intense, sustained firing when necessary. Again at the Dunes, when the English infantry first advanced they halted within musket range of the Spanish, who fired two volleys at them that caused a few casualties. Instead of allowing themselves to be drawn into a long range firefight they prepared for the assault, covered by commanded, or detached, musketeers who kept up a continual fire on the Spanish. Once the main body of infantry was ready to attack, the commanded musketeers opened to let it through.¹⁵⁶ Again the attacking infantry ignored the enemy fire in order to get close to deliver their own fire.

By contrast, there is nothing to suggest that the infantry of other European nations were doing anything other than continuing to use methods of firing similar to those developed at the start of the century and described by Barrife. The two nations most closely connected to Britain as, variously, friend and foe, were France and the Netherlands. The French continued firing by ranks rotating to the front until they devised a new form of firing by ranks in the 1670s.¹⁵⁷ The Dutch also continued with the drill first devised by Maurice of Nassau until the 1670s.¹⁵⁸ The Swedes, so influential on tactics in the 1630s, also seem not to have changed until the end of the century when they devised a technique for the offensive known as 'ga-pa'. This required the infantry, in four ranks, to ignore enemy fire and close rapidly, pausing for the two rear ranks to fire at about 50 paces and the two front ranks firing immediately before contact.¹⁵⁹ This could be said to have similarities with the British

¹⁵⁵ Morgan, *Relation*, p.6.

¹⁵⁶ Morgan, *Relation*, p. 8; Lytton Sells, *James II*, p. 264.

¹⁵⁷ Nosworthy, *Anatomy of Victory*, pp. 48-50.

¹⁵⁸ See below, pp. 78-79.

¹⁵⁹ Nosworthy, *Anatomy of Victory*, p. 107.

method of firing three ranks at a time at very close range before closing to hand to hand combat, but by the time it was in use British infantry fire techniques had developed further.

Another feature of what English infantry was doing was their ability to defend themselves against cavalry in line, without the musketeers having to fall back on the pikemen. Although this was done by the Royalist musketeers at Edgehill and the Scots at Marston Moor these are rare occurrences and the preferred response to cavalry of short range fire and then using clubbed muskets showed a high degree of confidence in firepower.

Despite the numerous manuals available, such as Barriffe and Elton, it was only in 1676 that the first official drill book for the English army was published. It was titled *An Abridgement of the English Military Discipline* and was published 'By His Majesties permission'.¹⁶⁰ A later edition, diplomatically titled *An Abridgement of the Military Discipline*, was published in Edinburgh in 1680 for the use of the Scots army.¹⁶¹ The drill for the musket was still for the matchlock and was unchanged from Elton except for the order it was given in and some of the phrasing. The result was a simpler and briefer set of instructions.

In describing the various ways of delivering fire the first given was firing by two ranks advancing. This was just the same as described by Barriffe forty-one years earlier, down to the marching to the rear around the outside of the unit, except it did allow for

¹⁶⁰ Anon., *An Abridgement of the English Military Discipline* (London, 1676).

¹⁶¹ Anon., *An Abridgement of the Military Discipline Appointed by His Majesty to be used by all His Forces in His Ancient Kingdom of Scotland* (Edinburgh, 1680).

the two advanced ranks to fire together. The manual went on to describe firing to the flanks and rear which were variations of firing advancing. These were followed by a description of Street Firing. In this the pikes blocked the street, or any narrow passage, while the musketeers loaded behind them and then, rank by rank, filed up one side of the pikes, formed a rank in front of them, fired and then filed to the rear down the other side of the pikes. This was followed by a method called *The Swedes Way*, which is discussed in detail in the next chapter¹⁶². This is similar to the three ranks firing described by Elton and used by the English troops in Holland and Portugal. For the first time there were instructions on how to form a square, in this edition both a hollow and a solid square. In this formation the square of pikemen was surrounded by the musketeers three deep. When attacked by cavalry all three ranks fired together, the front rank of musketeers kneeling, the second stooping and the third standing upright. A section of the manual headed *Orders for Battel* included the direction: 'As soon as the Battalion comes to thirty Paces distance from the Enemy, let the Musqueteers Fire, the manner of which Firing shall be ordered them before.'¹⁶³ There were also sections dealing with cavalry drill and camps.

There were a further seven editions of the *Abridgement*, the first five with mostly minor alterations and additions.¹⁶⁴ In the 1685 editions published in Dublin and London there were major changes, which also appeared in the next and last edition of 1686. Many sections were enlarged with more detailed instructions. Drill for the

¹⁶² See below, p. 75-78.

¹⁶³ Anon, *Abridgement* (1676), p. 76.

¹⁶⁴ These were 1678, 1680 (Edinburgh), 1682, 1684, 1685 (two editions, in London and Dublin) and 1686. The 1678 edition had an addition of detailed instructions for each movement in both musket and pike drill, as well as additional sections dealing with grenadiers and dragoons. The solid square was dropped from it. The 1680 Edinburgh edition differed only in the title. The 1682 edition had some useful explanatory diagrams added. The 1684 edition was effectively a reprint of the latter.

firelock musket made its first appearance and there were also separate sections for battalions with firelocks and with matchlocks and others dealing with Horse Grenadiers, garrisons and mounting guards. The most significant changes, however, were in the methods of firing. When firing in square the front rank was to kneel while the other two fired and then stand and fire in its turn.¹⁶⁵ Firing by two ranks and The Swedes Way disappeared. Instead, when firing to the front, the first five ranks of musketeers were to kneel while the sixth, rear rank fired over their heads. The fifth rank was then to stand and fire, followed by the fourth and so on. After firing each rank was to reload, the obvious problem being that the sixth rank would be reloaded and ready to fire before the first rank was reloaded. The 1685 Abridgements also claimed that this method of firing could be carried out by two ranks or even three ranks at a time, one kneeling, one stooping and one standing, or the first two stooping, presumably if there were other ranks kneeling in front of them.¹⁶⁶ Clearly this method of firing was only possible if the battalion was stationary. When advancing a battalion was to halt briefly to allow the front rank to fire. After firing this rank was to file to the rear and the battalion was to march on until its commander halted it again for firing.¹⁶⁷ However, the *Orders for Battel* no longer specified any range for opening fire. Another, quite separate section, gave an alternative way of firing. This required the musketeers to be reduced from six ranks to three, but not to fire in three ranks. Instead the first rank was to kneel while the other two ranks fired and then to stand and fire in its turn. After firing the musketeers were to club muskets and fall on.¹⁶⁸ This method retained something of the doctrine of delivering maximum

¹⁶⁵ Anon, *An Abridgement of the English Military Discipline* (London, 1685), p. 138.

¹⁶⁶ Anon, *Abridgement* (1685), pp. 160-61.

¹⁶⁷ Anon, *Abridgement* (1685), pp. 161-62.

¹⁶⁸ Anon, *Abridgement* (1685), pp. 128-29.

fire, albeit by two ranks rather than three, immediately followed by closing to hand to hand combat. Generally, however, these changes appear to have reduced the firepower of the infantry.

This change in approach to the delivery of fire would appear to be down to the adoption of French ideas. A British brigade served in the French army from 1672 to 1678 and a copy of the French drill manual *Le Major Parfait* was inscribed 'this book did belong to King James' and dated 1686.¹⁶⁹ Writing in 1670-1671 Sir James Turner referred to the French General Martinet describing a way of firing in six ranks. 'Of six ranks of Musqueteers he would have the first five to kneel; the sixth to stand and fire first, then the fifth to rise and fire next, and consecutively the rest, till the first rank have fired, after which he will have the foremost five ranks to kneel again, till the sixth discharge, if the service last so long.' Turner expressed severe reservations about firing in this manner, suggesting that it put the men in the front ranks in danger from their own side.¹⁷⁰ However, the French writer Demoriet wrote in 1686:

The best way of firing is by ranks when it is desired to fire in line, parallel to the foe. To do this, and to fire without embarrassment, it is best to fire at the halt without making any move except that needed to make the first five ranks kneel on the ground; and the sixth is that which makes its first fire, the fifth than doing the same and the rest consecutively.¹⁷¹

The introduction of drill for the firelock musket in the 1685 edition of *An Abridgement* reflected the increasing use of firelocks by the infantry. This was a process that had been under way since during the English Civil Wars. At Cropedy Bridge some of Waller's Parliamentarian infantry had firelocks and during the night after the battle

¹⁶⁹ Chandler, *Art of Warfare*, p. 116.

¹⁷⁰ Turner, *Pallas Armata*, p. 238.

¹⁷¹ J. Demoriet, *Le Major Parfait* (1863), in Harleian Ms 4655, p.43, as cited in Chandler, *Art of Warfare*, p. 116.

Richard Coe recorded that 'our Fire-locks were placed under a hedge, and light matches hung alone on pallisadoes a Musket shot off'.¹⁷² At the Battle of the Dunes, Morgan had four hundred men armed with firelocks.¹⁷³ In January 1683 the Coldstream Guards were ordered to replace their matchlocks with firelocks while in March it was ordered that two companies in each infantry regiment should be armed with firelocks.¹⁷⁴ On the 21 February 1687 a regulation was issued giving specifications for infantry firearms. The Musketeers of the Guards regiments were to have Snaphance muskets with a barrel length of 44 inches, other musketeers were to have matchlock or Snaphance muskets with 42 inch barrels.¹⁷⁵ Fuziliers, a new type of infantry originally formed to guard the artillery, were to have Snaphance muskets with 44 inch barrels while the grenadiers of infantry regiments were to have carbines with 38 inch barrels.¹⁷⁶ The carbine was traditionally a cavalry weapon with a relatively short barrel. The description of the Grenadiers muskets as carbines was a reference to the bore size, a carbine having a smaller bore than a musket. Undoubtedly the reduction in barrel length and weight from the musket of the 1640s and 1650s made these muskets easier to handle and thus quicker to load. However, only the Fuziliers and grenadiers were to use cartridges, the rest still using bandoleers.

The adoption of the firelock, or flintlock musket and the cartridge by some units in the army would make a difference to the speed of loading of individual soldiers in those units, but in the 1680s the majority of the infantry was still using the matchlock. What

¹⁷²Richard Coe, *An Exact Diarie or a Briefe Relation of the Progress of Sir William Wallers Army* (London, 1644), p. 6.

¹⁷³Morgan, *Relation*, p. 8.

¹⁷⁴Daniel MacKinnon, *Origin and Services of the Coldstream Guards* (London, 1833), p. 167.

¹⁷⁵Firelock and Snaphance were the contemporary terms for the flintlock.

¹⁷⁶MacKinnon, *Coldstream Guards*, p. 189.

was as important as the weapons in use was how the infantry was organised to produce its firepower. In this regard the adoption of French firing methods and the apparent abandonment of the aggressive tactics developed in the 1640s and 1650s would appear to be retrograde changes, but these changes were not to be tested in battle.

An account of the siege of Tangiers contains some interesting information concerning the supply of ammunition on the battlefield. From 1661 to 1684 England was in possession of Tangiers, part of the dowry of Charles II's Portuguese bride, Catherine of Braganza.¹⁷⁷ During this occupation the Garrison was in frequent conflict with the Moors and was besieged in 1680. John Ross described how on one occasion the fighting continued 'for the space of Seven or Eight hours desperately, and continually firing on both sides from right to left, that it was nothing for a Musketeer to empty three or four Bandeleers notwithstanding of their reliefs every two hours.'¹⁷⁸ This represents the expenditure of between thirty six and forty eight rounds a man, a considerable amount of ammunition. However, Ross also gave some clues as to how this was managed. On another occasion he recorded that:

The Scots Granadeers once forgot their Poudre and Ball in the Enemies Trench: Their Lieut. Called Mackrackan, endeavoured to recover and regain it, but in vain, which perceiving; he threw three or four Granades with his own hand to set it a fire before it should fall in the Enemies hands, to the great danger of his life.¹⁷⁹

¹⁷⁷ E. M. G. Routh, 'The English at Tangier', *The English Historical Review*, Vol. 26, No. 103, (July, 1911), pp. 469-81.

¹⁷⁸ John Ross, *Tangers Rescue or a Relation of the Late Memorable Passage at Tanger* (London, 1681), p. 10

¹⁷⁹ Ross, *Tangers Rescue*, p. 14.

He also made a reference to 'Gentlemen of the Pouch': 'This is a most useful Officer in an Army, and 'tis requisite he be stout also, otherwise they may want Powder, and Ball when they have most to do.' He also referred to 'Powder-monckies.'¹⁸⁰

From this evidence it is possible to make some tentative proposals about how the resupplying of ammunition was being managed on the battlefield. As also suggested by instances from the English Civil Wars of musketeers accidentally blowing up powder barrels it would seem that it was normal practice for units to carry into battle a supply of loose powder and musket balls. It would have to be loose powder in order to be able to refill the individual charges on a bandoleer. How this was done was suggested in the Earl of Newcastle's drill manual of 1642 when it said 'A measured charge shall be given to every Muskettier that holds just so much powder as halfe the bullet weighes at ten bullets in the pound, to fill their Bandaliers withal.'¹⁸¹ This ammunition may have been carried in small barrels or leather pouches, hence the Gentlemen of the Pouch at Tangiers. Monck wrote in 1646 that in addition to a bandoleer with powder and musket balls 'each musqueteer ought to have twelve Bullets a-piece in their pockets; and each company must carry with them a Powder-Bag full of Powder'.¹⁸² It seems that this supply was set down on the ground during combat, either to facilitate distribution or so that the carriers could fight. One thing is certain, that the weight of powder and ball for a single bandoleer amounts to one and a half pounds. To supply, for example, a company of sixty musketeers with refills for their bandoleers just once required thirty pounds of

¹⁸⁰ Ross, *Tangers Rescue*, pp. 26-27

¹⁸¹ Anon., *A True Description of the Discipline of War both for Horse and Foot* (nd), p. 2.

¹⁸² George Monck, Duke of Albemarle, *Observations upon Military and Political Affairs* (London, 1671), (written in 1646 when a prisoner in The Tower of London), p. 103.

powder and sixty pounds of musket balls. This was a not inconsiderable weight to man-handle around a battle field. It is not possible, on this limited evidence, to say exactly how ammunition resupply was being managed or that this reflects anything other than the practice in Tangiers in the 1680s. However it does begin to offer a possible answer to the question of ammunition resupply to musketeers using bandoleers rather than cartridges, which were already beginning to come in to use. The cavalry had used them for their firearms since the 1630's and Orrery was a champion of their use.¹⁸³

During the English Civil War a particularly aggressive way of fighting based upon the close range delivery of overwhelming firepower followed by an immediate advance to hand to hand combat was developed in England and Scotland and used by all protagonists. This was not something found in the drill books and although it was similar to the Swedish Salvee developed by Gustavus Adolphus there were important differences, primarily in the manner of its application. The Swedes used this as a part of their fire tactics and with limited application.¹⁸⁴ In contrast English and Scots infantry would frequently, even habitually, fight in this manner. Given the widespread availability of information about Swedish tactics it is possible that this represents a uniquely British development of the use of the Swedish Salvee, but the manner of that development and its adoption right across the British Isles is unknown. This development occurred in isolation and was not matched by any similar development in Europe where the application of this way of fighting achieved dramatic results. In 1685 the adoption of a French firing system resulted in the loss

¹⁸³ John Cruso, *Militarie Instructions for the Cavallrie* (Cambridge, 1631), p. 41; Roger, Earl of Orrery, *A Treatise of the Art of War* (London, 1677), p. 31-32.

¹⁸⁴ See below, p. 71.

of the ability to concentrate the firepower of a whole battalion into a single volley, thereby making it impossible to continue to rely upon the aggressive application of firepower as a key element of battlefield doctrine. This retrograde position was, however, short lived. In 1688 the Glorious Revolution placed the English and Scottish armies firmly under the influence of Holland when the French ways were swept aside and replaced by the latest Dutch practice and in particular the recently developed platoon firing.

3: The origins of platoon firing and its introduction into the English and Scots Armies

From the late seventeenth century and into the middle of the eighteenth century the method employed by British infantry to deliver its firepower was platoon firing, which was a major factor in British success on the battlefield. It is generally accepted that it was introduced from the Dutch army by William III after the Glorious Revolution of 1688 when he and Queen Mary succeeded the deposed James II.¹⁸⁵ It has, however, been far from clear what the origins were of platoon firing, just when and how the English and Scottish armies adopted it, for they were still two separate establishments, and precisely what form it first took.

Chandler wrote 'It is almost impossible to trace the real origins of the platoon firing system with any certainty.'¹⁸⁶ In seeking to establish the origins of platoon firing he quotes the French writer Le Blond.

Platoon fire, introduced in France as part of the 6 May 1755 Ordinance, was a well established practice by the Dutch; there is some evidence that they can be credited with the original idea and that it was they who introduced the practice to the other European nations who adopted the practice.¹⁸⁷

However, as well as crediting the Dutch as the originators of platoon firing Chandler also records the suggestion made by some that platoon firing actually originated with the Swedes under their King, Gustavus Adolphus in the 1630s.¹⁸⁸

Chandler further suggests that the introduction of platoon firing to British troops took place in Flanders in 1689 when Marlborough took a contingent of the army there to

¹⁸⁵ David Chandler, *The Art of Warfare in the Age of Marlborough* (Staplehurst, 1990), p. 116; Brent Nosworthy, *The Anatomy of Victory, Battle Tactics 1689-1763* (New York, 1992), p. 55.

¹⁸⁶ Chandler, *Art of War*, p. 116.

¹⁸⁷ Guillaume Le Blond, *Elemens de Tactique* (Paris, 1758), pp. 405-06.

¹⁸⁸ Chandler, *Art of Warfare*, pp.116-17.

join William's Dutch army.¹⁸⁹ What he does not do is give any indication of how platoon firing came to be in use throughout the English and Scottish armies and not just that part in Flanders. Furthermore, no historian has yet identified just how platoon firing was first carried out by the English and Scots armies. Chandler does give a description of platoon firing, but this is based on Kane's instructions in his *Discipline for a Regiment of Foot*.¹⁹⁰ This formed part of Kane's book *Campaigns of King William and Queen Anne; From 1689 to 1712*, which was not published until 1745, after Kane's death. Chandler is, however, writing about infantry tactics during the period 1688 to 1748, a somewhat broad definition of the Age of Marlborough, and Kane's version of platoon firing is clearly of a later date than 1689. Most obviously it contains no reference to pikemen, then still an integral part of infantry regiments. Furthermore the full title for this section of Kane's book is *A New System of Military Discipline for a Battalion of Foot on Action* and the introduction states that Kane wrote it because he considered other military manuals available to be inadequate. This would suggest that he was writing what he considered to be contemporary best practice for the period after 1712 and before 1736, when he died, and not describing the practice of some twenty five years or more earlier.

This chapter will identify the unique characteristics and nature of platoon firing, which is necessary in order to identify its early forms and origins. It will examine the origins of platoon firing, including the claims for Gustavus Adolphus, give an account of the

¹⁸⁹ Chandler, *Art of Warfare*, p. 116.

¹⁹⁰ Chandler, *Art of Warfare*, p. 117-20; Brigadier General 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, 1745).

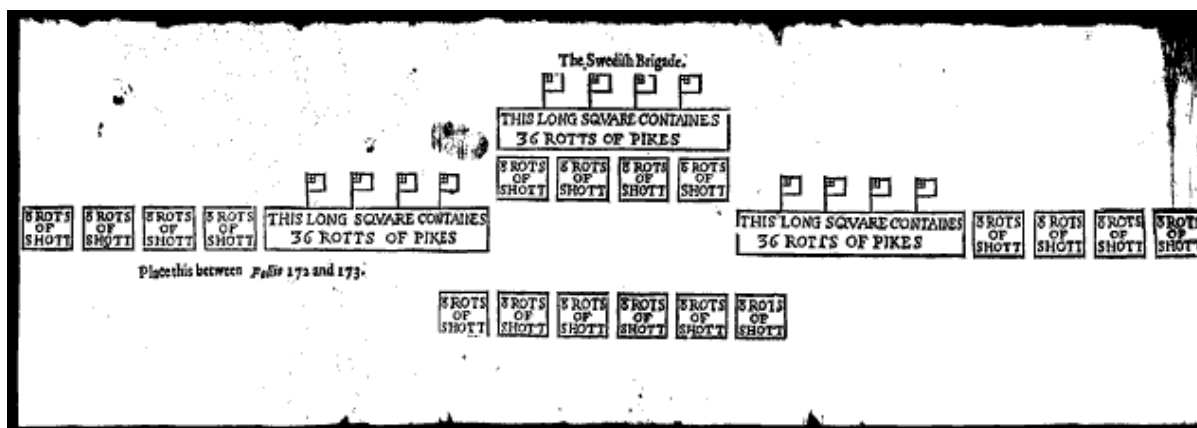
introduction of platoon firing into the English and Scottish armies, and identify and describe its original form as practiced in 1689.

It is possible to identify three elements that when combined give platoon firing its unique character and distinguish it from any other fire delivery system. First, the infantry were organised into platoons, a tactical sub-unit of a larger battalion or regiment that did not necessarily correspond to any other sub-unit, such as the company. Secondly, the soldiers were drawn up in three ranks, later reduced to two ranks, and all the ranks fired together. Thirdly, the platoons were drawn up in a line and fired in turn along the line according to a preordained pattern, which ensured that a part of the line was always loaded and ready to fire.

Two of these elements, the platoon as a sub-unit of infantry formations and putting musketeers into three ranks rather than the more usual six, were well known before the start of the English Civil War in 1642. Both practices originated in the Swedish army under Gustavus Adolphus and were described in some detail by the professional Scottish soldier Robert Monro, who served in the Swedish army from 1630 to 1634.¹⁹¹ He described the organisation of the infantry into brigades with the musketeers in platoons or, as he writes, 'Plottons', of forty-eight men in eight rots or files, each of six men, that is with each plotton having six ranks, see figure 3.1.

¹⁹¹ William S. Brockington, Jr., (ed.) *Monro, His Expedition with the Worthy Scots Regiment Called Mac-Keys* (Westport CT, 1999, first published London, 1637), p. 316.

Figure 3.1: An illustration of a Swedish Brigade from Barriffe and based on Monro's description.¹⁹²



Monro then described the process for firing three ranks together in what he called a 'salve' and later became known as a salvee or volley.

When you would command the body of your musketeers to give fire in a salve, as is ordinarie in Battell, before an enemy joyne, or against Horsemen; then you command the bringers up or Reare to double the Front to the right hand, and to make readie, having the match cocked and their pannes well guarded, having closed the three Rancks, though not the Files, the Officers standing in equall Front with the foremost Rancke, betwixt two Divisions, he commands to give fire, one Salve, two or three, and having charged againe, and shouldered their Armes, they retire to the left hand againe, every man falling behind his owne Leader.¹⁹³

In this manoeuvre the rear three men in each file marched forward and placed themselves alongside the front three, either to their left or, as described by Monro, to their right. This three deep formation was shallow enough for all three ranks to fire together, with the front rank kneeling, the second stooping and the third standing

¹⁹² William Barriffe, *Militarie Discipline or The Young Artillery-Man* (London, 1661, 6th Edn.), pp. 172-73; Brockington, *Monro*, pp. 316-317. William Barriffe's *Militarie Discipline* was first published in 1635, but without the information about Swedish formations, which first appears in the second edition of 1639.

¹⁹³ Brockington, *Monro*, p 323.

upright.¹⁹⁴ After firing as many salves as required the men from the rear could march back to their original positions, bringing the plotton back to six ranks.

The Swedish Intelligencer, published in London, described the effect of this form of firing at the battle of Leipzig in 1631;

The Scots ordering themselves in sevrall small battagliaes, about 6 or 700 in a body, presently now double their rankes, making their files then but 3 deepe (the discipline of the King of Sweden being, never to march above 6 deepe) this done, the foremost rancke falling on their knees; the second stooping forward; and the third rancke standing up; and all giving fire together, they powred so much lead at one instant in amongst the enemies horse, that their ranckes were much broken with it.¹⁹⁵

Its use at Breitenfeld has already been described.¹⁹⁶

This practice was deliberately spread to other armies allied to Sweden. On 9 May 1632 at Munich Gustavus Adolphus;

Held a generall Muster before the City: himself (to shew some content to the Bavarians) drilling and exercising his souldiers: teaching them especially how to give a Charge or Salvee; some upon their knees, other behind them stooping forward; and the hindmost ranke standing upright, and all to give fire at once, the hinder man over his foremans shoulder.¹⁹⁷

Monro's service with the Swedish Army ended in 1634 when his regiment was destroyed at the battle of Nordlingen while he was in Scotland recruiting.¹⁹⁸ Two years earlier, in 1632, Sir James Turner had joined the Swedish Army and served briefly under Gustavus Adolphus who was killed that year at the battle of Lutzen.¹⁹⁹

¹⁹⁴ Sir James Turner, *Pallas Armata* (London, 1683), p. 238.

¹⁹⁵ William Watts, *The Swedish Intelligencer, The First Part* (London, 1632) p. 124.

¹⁹⁶ See above, p. 40.

¹⁹⁷ William Watts, *The Swedish Intelligencer, The Second Part* (London, 1632) p. 169.

¹⁹⁸ Brockington, *Monro*, p. xvi.

¹⁹⁹ Sir James Turner, *Memoirs of His Own Life and Times* (Edinburgh, 1829), pp. 4-5.

In *Pallas Armata* (written in 1670-71) Turner gave a slightly different account of the Swedish use of musketeers. He also gave a description of the Swedish Brigade and, referring to the gaps between the three blocks of pike men as being like sally ports, described how the musketeers would sally out from behind the central pike block.

There were two passage like sally ports between the reer of the advanced Body of Pikes, and the two Batallions that staid behind, out of one whereof on the right hand issued constantly one or two more hundreds of Musqueteers, who before all the three Bodies of Pikes gave incessantly fire upon the Enemy, and when the word or sign for a Retreat was given, they retir'd by the other passage on the left hand, back to the great Body of Musqueteers, where so many of them as came back unwounded, were presently put into rank and file, the fire continuing without intermission by Musqueteers, who still sallied through the passage on the right hand; and it is to be observed that the firemen fought thus in small Bodies, each of them not above five files of Musqueteers, and these for the most part but three deep.²⁰⁰

There is, however, no suggestion of any pattern to this fire. Turner's description also varies from Monro and others in that he has all the musketeers formed behind the blocks of pikemen and none flanking the pikes as in Figure 3.1.

While two of the requirements for platoon firing can be attributed to the Swedish Army under Gustavus Adolphus, the use of platoons and firing in three ranks, the third element, a line of platoons firing in a set pattern, is absent. Furthermore, after the death of Gustavus Adolphus the Swedish Brigade disappeared from use.²⁰¹ Despite its success under Gustavus Adolphus it was complex and demanded a high degree of training and discipline. During the first half of the seventeenth century, the rest of Europe had gradually adopted the simpler linear deployment of infantry developed by Maurice of Nassau at the end of the sixteenth century and which, by the middle of the century, had become the norm.

²⁰⁰ Turner, *Pallas Armata*, p. 228.

²⁰¹ Roberts, *Cromwell's War Machine*, p. 152.

The depth of infantry units had gradually decreased from the beginning of the century, when the tactics developed by Maurice of Nassau employed ten ranks, to the middle of the century when six ranks was the rule. The number of ranks was dictated by the length of time it took to reload a musket. As Turner discusses, initially ten ranks were required to keep up a sustained fire from a unit because it took as long for one rank to reload as it did for the other nine to come successively to the front and fire in their turn.²⁰² As muskets were lightened and improved and loading was speeded up it became possible to reduce the depth to five or six ranks, but not to have less than that, let alone as few as three ranks. Turner states specifically that firing one rank at a time in three ranks does not give the first rank time to reload before the third has fired.²⁰³ As for firing in three ranks all together, the military writers of the first half of the seventeenth century are consistent in their reservations about this, which is that it leaves a unit open to attack before it can reload. Consequently they considered that it was only to be used in extremis, such as against a cavalry attack when firepower must be maximised to stop it or immediately before charging home against an enemy. Monro wrote that its use was 'ordinaire in Battell, before an enemy joyne, or against Horsemen'.²⁰⁴ For all other occasions he says that firing by ranks is 'the forme that I esteeme to be the best.'²⁰⁵ Thus, while the devastating effect of a three rank volley was well known, the circumstances under which it could be employed were considered to be severely limited. For

²⁰² Turner, *Pallas Armata*, pp. 216-17.

²⁰³ Turner, *Pallas Armata*, p. 217.

²⁰⁴ Brockington, *Monro*, p. 323.

²⁰⁵ Brockington, *Monro*, p. 322-23.

example, the description given above from the *Swedish Intelligencer* is of the effect of firing in three ranks against a cavalry attack at Leipzig.

Monro and Elton, although writing some twenty years apart, both described units of musketeers, six ranks deep, firing two ranks at a time, that is in three volleys.²⁰⁶ This would seem to be at odds with Turner's statement that three ranks could not reload fast enough to keep up a sustained fire. However, sustained fire was not always the objective. When Monro describes each pair of ranks advancing ten paces in front of the unit before firing, he is describing attacking an enemy, 'ever advancing to an enemy, never turning backe without death or victorie'.²⁰⁷ Under those circumstances it would seem that a brief period of a high rate of fire was preferable to slower sustained fire. Elton also described firing the six ranks in two lots of three, which also would not allow enough time to reload in order to keep up a constant fire, but he also described firing one rank at a time, which would.²⁰⁸

Orrery, in his *Treatise of the Art of War* published in 1677, also discussed the number of ranks and the rate of fire.²⁰⁹ Based on his own experience, he recommended fighting in four ranks, whilst acknowledging that the idea would not be readily accepted.

The chief objection that I know of, is, as to the Musketeers, who being but four deep, and advancing firing, the first Rank cannot have loaded their Muskets again, by that time the fourth Rank has done firing; so that there will be an intermission of shooting. To that I answer, Let the Musketeers Charge their Muskets with such Cartridges as I have mentioned, and the first Rank will be as soone ready if you are but four deep, as the first Rank will be if you are six

²⁰⁶ Brockington, *Monro*, p. 322; Elton, *Compleat Body*, pp. 192-93.

²⁰⁷ Brockington, *Monro*, p. 322.

²⁰⁸ Elton, *Compleat Body*, pp. 192-93.

²⁰⁹ Roger, Earl of Orrery, *A Treatise of the Art of War* (London, 1677), p. 38.

deep, loading with Bandoleers, especially if I use the Fire-lock, and the Enemy the Match-lock.

What Orrery was saying was that musketeers with cartridges and firelocks could reload in two thirds of the time that it took musketeers with matchlocks and bandoliers. Thus, a unit in four ranks could deliver fire from a rank just as often as one in six ranks. Given two units of the same size, the unit in four ranks would also have half as many men again in each rank as the unit in six ranks, thus firing half as many shots again from each rank. What four ranks could not do, however, was all fire at once, which was only possible with three ranks.

The cartridge had the advantage over the bandoleer that the powder for loading the musket and the ball were both contained in a roll of paper, the cartridge. The musketeer simply bit open the cartridge at the end opposite the ball and poured the powder down the barrel, followed by the paper and ball. Initially the musket was still primed from a separate flask. The advantages were spelt out by Orrery who was 'a great approver of Boxes of Cartridges; for then, but by biting off the bottom of the Cartridge, you charge your Musket for service with one Ramming'.²¹⁰ As for the firelock he gave a whole list of reasons for its superiority over the matchlock.²¹¹

The use of the cartridge and the firelock or flintlock musket had the effect of speeding up the reloading process. If Orrery is correct and four ranks could keep up the same rate of fire as six with matchlock musket and bandoleer that is a reduction in the loading time of one third. This, in theory, made it possible to reduce the number of ranks needed to keep up a continual fire. However, the introduction of

²¹⁰ Orrery, *Art of War*, p. 31.

²¹¹ See above, p. 30.

both into the British Army was slow and while the matchlock and bandoleer remained in service six ranks remained the norm. It was not until 1685 that James II ordered the army to be completely equipped with flintlocks. A process accelerated by William III and only completed in the early years of the eighteenth century.²¹²

There are two key points to understanding the ways in which infantry firepower was delivered during the period predating the introduction of platoon firing. The first is that for defensive firing it was important to maintain a steady and continuous fire. The great fear was of being attacked when a unit was unloaded, particularly by cavalry. To avoid this danger a sufficient depth of ranks was required to allow time for reloading. By the 1640s this was generally taken to be six ranks. The second point is that when attacking it was advantageous to maximise the rate of fire to deliver as much firepower as possible in as short a time as possible before closing to hand to hand combat when there was no point in being loaded, particularly with a matchlock. This required breadth rather than depth so that all the musketeers could fire at once. As Turner put it;

Next, firing by three ranks at a time, should not be practised, but when either the business seems to be desperate, or that the Bodies are so near, that the Pikemen are almost come to push of Pike, and then no other use can be made of the Musquet but of the Butt-end of it. I say then that this manner of six ranks to fire at two several times is not at all to be used; for if it come to extremity, it will be more proper to make them all fire at once, for thereby you pour as much lead in your enemies bosom at one time as you do the other way at two several times, and thereby you do them more mischief, you quail, daunt, and astonish them three times more, for one long and continued crack of Thunder is more terrible and dreadful to mortals than ten interrupted and several ones, though all and every one of the ten be as loud as the long one.²¹³

²¹² Chandler, *Art of Warfare*, pp. 78-79.

²¹³ Turner, *Pallas Armata*, p. 237

Thus the reason for the various ways of delivering fire was the necessity to be able to meet the differing tactical demands of attack and defence, something that no single fire delivery system could do prior to the development of platoon firing. The use of the short range volley given in three ranks in both attack and defence that was developed in Britain during the Civil Wars is overlooked by Turner. Similarly it has no place in the writing's of Orrery and Albemarle. These are all soldiers with experience in the Civil Wars, as well as on the continent, who were writing after those wars, but all three make very little mention of anything from them. It is as if diplomatic considerations had rendered invalid any practical lessons. Regardless of the efficacy of the close range, three rank volley, however, the fact remained that it did not solve the question of how to combine heavy, effective fire with sustainable fire.

A new way of firing made its appearance in 1676 with the publication, 'by His Majesties Permission', of *An Abridgement of the English Discipline*.²¹⁴ In addition to the usual and well established firing by ranks, either singly or in pairs, this official publication also included a description of what it called the 'Swedes Way'.²¹⁵ This involved reducing the ranks of musketeers from six to three by doubling their front. Each block of musketeers, one on each side of a central block of pikes, was then subdivided.

Figure 3.2 shows how the subdivisions were arranged, slightly in advance of the pike division and alternating one forward and one back. The advanced subdivisions fired first, either all three ranks, kneeling, stooping and standing or the first rank kneeling and reserving its fire while the second and third ranks fired. These subdivisions

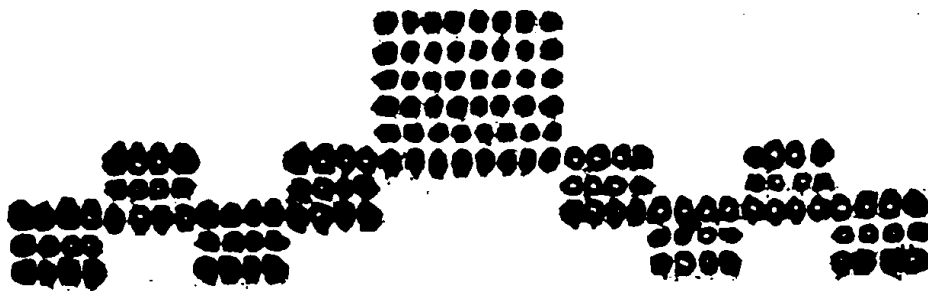
²¹⁴ Anon, *An Abridgement of the English Military Discipline* (London, 1676).

²¹⁵ Anon, *Abridgement*, (1676), p 31-32.

would then reload where they stood while the rear subdivisions advanced to fire in their turn. As the subdivisions were split into two lines that fired alternately, it was still considered necessary to have the option of reserving the fire of one rank in order to avoid the danger of having all the musketeers reloading at the same time.

Figure 3.2: The Swedes Way, from the 1684 edition of *An Abridgement of the English Discipline*.²¹⁶

*Swedes way.*¹
Rear half Files of Mus-
quetiers,
To the Right or Left
double your Front.



²¹⁶ Anon, *An Abridgement of the English Military Discipline* (London, 1684), p. 35. There were several editions of *An Abridgement*, London, 1676; London, 1678; Edinburgh, 1680; London, 1682; London, 1684; Dublin, 1685 and London 1685.

The illustration appears to be purely indicative of how the formation should appear; it contains 144 men in the ratio of two musketeers to one pikeman. The Abridgement did not state how many subdivisions there should be for a battalion formed up for battle. However, it did say that a battalion normally comprised six companies, which was half a regiment.²¹⁷ One possibility was that the musketeers of the six companies were divided into eight subdivisions as in the illustration. This would result in each subdivision of musketeers being between twenty and thirty men.²¹⁸ This was a similar size to the subdivision of four, five or six files in six ranks as described by Elton, which gave a strength of from twenty-four to thirty-six men.²¹⁹

At this time the company was a purely administrative unit consisting of both pike and musket that was broken up to form battlefield formations. It would appear, instead, that there was a preference for tactical subdivisions of musketeers to be about twenty-four to thirty men. The reason for this would appear to be connected to command and control. Monro observes;

To exercise a squadron of Musketers, how strong soever they be, the number of Rancks being no deeper than six, the files being even may be so many as your voice can extend to, ever observing that your Command be given in the Front, otherwise may breede disorder...and above all things you are to command them to keepe silence, not babbling one to another....²²⁰

In other words, a platoon is limited in size by the reach of the commander's voice.

When firing in ranks Monro wrote that the officer commanding the musketeers must stand 'even in Front with them, the Cannon or mouth of their Muskets of both Rancks being past his bodie'.²²¹ Similarly when firing in salve he described 'the Officers

²¹⁷ Anon, *Abridgement* (1676), p 74.

²¹⁸ The strength of a company was variable, but in the English army of the 1680s was between 40 and 60, Chandler, *The Art of Warfare*, p. 96.

²¹⁹ Elton, *The Compleat Body*, p. 154.

²²⁰ Brockington, *Monro*, p. 319.

²²¹ Brockington, *Monro*, p. 322.

standing in equall Front with the foremost Ranck, betwixt two Divisions'.²²² The difficulties of command in battle were also touched on by Elton who wrote of 'Commanders, whose voices are drown'd by the loud thundering of the Cannon or Mukettiers; as also by the neighing of Horses, or the lamentable cries of the maim'd and wounded Souldiers'.²²³

This form of firing, the 'Swedes Way', disappeared with the publication of the 1685 edition of *An Abridgement*, but it did represent an attempt at producing linear fire using small subdivisions of three ranks that all fired together rather than depending on ranks coming to the front of a unit in turn to fire. The subdivisions fired in a simple alternating sequence along the line and it thus qualifies as an early form of platoon firing. The problem that had not been solved was how to fire in a linear formation without too long an interval between discharges of fire.

The name for this way of firing, the 'Swedes Way', gives rise to the possibility that platoon firing was first developed in Sweden. There is no doubt that that the Swedes under Gustavus Adolphus were the first to use platoons of musketeers and to fight and fire in just three ranks. If they had taken the next step towards platoon firing proper, as opposed to simply firing in platoons, then one might expect to find evidence of that before 1676 when the 'Swedes Way' first appears in an English drill book. The last Swedish drill book produced before then appears to be *Een Militarisch Exercitiae Book*, published in Stockholm in 1669.²²⁴ However, it contains nothing that bears any similarity to the 'Swedes Way'. The most likely explanation for the name is

²²² Brockington, *Monro*, p. 323.

²²³ Elton, *The Compleat Body*, p. 54.

²²⁴ Ofwersteleut Iulius Richard De Lachapelle, *Een Militarisch Exercitiae Book* (Stockholm, 1669).

that it is simply a reference to the use of platoons and three ranks. When, the 'Swedes Way' disappeared from *An Abridgement* it was replaced by a French system of firing by ranks with a six deep formation.

The earliest evidence for platoon firing by the Dutch is in a military manual of 1684 by Louis Paan.²²⁵ In the introduction to the second volume of his work Paan wrote that it contained descriptions of the organisation of battalions 'as they have been brought to practice in the last war'. By this he is referring to the war of 1672-1678 between France and the Dutch Republic. It describes something not dissimilar to the Swedes Way, but with each wing of musketeers divided into three platoons. As such it would appear to have suffered from the same drawback, which was that it did not allow for continuous firing. Paan also gave a reason for the development of platoon firing. Referring to battalions that fired by ranks he wrote;

Such Battalions as mentioned before have been esteemed for a certain period by most military, however it has been found that the Musketeers, after having fired in ranks, in retreating back made too wide a circle in order to get restored to readiness. This caused great disorder which is why this method has been rejected by several military men; that is to say, as far as giving fire in ranks is concerned it is considered to be better to do such with platoons instead of ranks. This is the reason why such changes have been made in the forming of Battalions as described before.²²⁶

The Dutch rejected the rotation of ranks by marching them down the sides of platoons to reload at the rear as it caused too much disorder. Clearly keeping the men in their ranks and firing and reloading in platoons was more efficient and less complicated or prone to confusion. They also chose not to emulate the French, who

²²⁵ Louis Paan, *Den korter weg tot de Nederlandsche Militaire Exercitie, Inhoudende verscheide extraordinaire Evolutien ende Bataillons, Mitsgaders de formen der Batailles*, Vol. 2, (Leuwarden, 1684).

²²⁶ Paan, *Nederlandsche Militaire Exercitie*, p. 40.

had developed their method for firing by ranks sometime before Turner described it in 1670-71.²²⁷

Following the accession of William and Mary in 1688 the English and Scots armies found themselves allied to the Dutch and involved in a war with France. One of the first consequences of this was the dispatch to Flanders of an English force under the command of the, then, Earl of Marlborough. In May 1689 Marlborough wrote to William's Secretary at War, William Blaythwayt:

I desire that you will know the King's pleasure whether he will have the Regiments of Foot to learn the Dutch exercise, or else to continue the English, for if he will I must have itt translated into English.²²⁸

There is no record of a reply or of any translation of Dutch drill being issued to English regiments, but this letter has been taken to demonstrate the introduction of Dutch drill to the English and Scots army.²²⁹ Much clearer evidence, however, is available that makes it clear that platoon firing was introduced to both the English and Scots armies in 1689. At the same time as Marlborough was in Flanders another combined Dutch and English army under the command of the Duke of Shomberg was fighting the forces of the deposed James II in Ireland. In September 1689 James II offered battle to Shomberg, who refused, keeping his army in its fortified camp at Dundalk. Subsequently James and his army withdrew to Ardee and went into winter quarters. No sooner had the Jacobite army retreated from Dundalk than Shomberg ordered that 'the Brigades that did not mount the Guards, should be exercised at firing at a Mark when it was Fair weather (as t'was very seldom) for the Duke knew

²²⁷ Turner, *Pallas Armata*, p. 238.

²²⁸ BL Additional Manuscript, 21506, f. 98.

²²⁹ For instance; David Chandler, *The Art of Warfare*, p. 116.

most of his men had never been in service, and therefore he would have them taught as much as could be'.²³⁰ Just how poorly trained the infantry was is apparent.

The Weather for two or three days proved pretty fair, and the Soldiers were exercised with firing at Marks; but it was observable, that a great many of the new men who had Match-Locks, had so little skill in placing of their Matches true, that scarce one of them in four could fire their Pieces off; and those that did, thought they had done a feat if the Gun fired, never minding what they shot at.²³¹

Then, on 29 September 1689, 'Lieutenant-General Douglas exercised the Regiments of the first Line, teaching them how to fire by platoons'.²³² Whilst this provides clear evidence of the introduction of platoon firing, there are, unfortunately, no details given of how it was conducted.

At the same time as Marlborough was campaigning in Flanders and Douglass in Ireland, William had sent Major General Hugh Mackay, a Scot in Dutch service, to take command of the forces in Scotland. In his diary he described how, before the battle of Killiekrankie in 1689, he had 'commanded the officers, commanding battalions, to begin their firing at the distance of 100 paces by platoons, to discourage the approaching Highlanders meeting with continual fire', thus demonstrating that platoon firing had also been introduced to the Scottish Army.²³³ On this occasion platoon firing was no match for the onslaught of the highland charge and Mackay lost the battle. In 1692 he was killed at the battle of Steenkirk. Then in 1693 a drill book was published in Edinburgh with a title page that stated it

²³⁰ George Warter Story, *A True and Impartial History of the Most Material Occurrences in the Kingdom of Ireland during the Two Last Years* (London, 1691), p. 23.

²³¹ Story, *True and Impartial History*, p. 24.

²³² Story, *True and Impartial History*, p 26.

²³³ Major General Hugh Mackay, *Memoirs of the War carried on in Scotland and Ireland* (Edinburgh, 1833), p. 55.

included '*the Rules of War in the day of Battel, when Encountering with the Enemy*'.²³⁴

This was, in part, a reprint of a drill book of 1690, the first issued under William and Mary, but which was limited to the infantry drill and did not include the *Rules of War*.²³⁵ According to the introduction to the 1693 Edinburgh edition Sir Thomas Livingstone, who had succeeded Mackay to the command in Scotland, had revised and corrected the earlier edition as well as adding the exercise of dragoons and also adding 'Lieutenant General Mackay's *Rules of War for the Infantry*, to be observed when they are to Encounter with the Enemy in the day of Battel'.²³⁶ Given the official nature of this publication, and its recommendation to the Scots and English Armies, there would seem to be no reason not to accept Mackay's rules as representing the then current practice in the Dutch Army that was adopted by the English and Scots Armies and that it was an approved description of battlefield doctrine for all three, allied, armies, from 1689 onwards. In these *Rules* the Dutch had solved the problem of keeping up sustainable fire using platoons. It also seems that they were published even before 1693 as the title page for the *Rules* describes them as reprinted, further strengthening the case for them being the practice introduced under William in 1689.

Included in Mackay's *Rules* were detailed instruction on how platoon firing was to be organised and conducted. The *Rules* were organised in twenty three articles and

²³⁴ Anon., *The Exercise of the Foot with the Evolutions, According to the Words of Command, As they are Explained. As also, the forming of Battalions, With Directions to be observed by all Colonels, Captains, and other Officers in Their Majesties Armies. Like wise The Exercise of the Dragoons Both on Horse-back and Foot. With the Rules of War in the day of Battel, when Encountering with the Enemy* (Edinburgh, 1693)

²³⁵ Anon., *The Exercise of the Foot with the Evolutions, According to the Words of Command, As they are Explained. As also, the forming of Battalions, With Directions to be observed by all Colonels, Captains, and other Officers in Their Majesties Armies* (London, 1690).

²³⁶ Anon., *The Exercise of the Foot with the Evolutions, With the Rules of War in the day of Battel, when Encountering with the Enemy*, n.p.

from the start it is clear that they represented a significant departure from previous doctrine. Whilst Mackay acknowledged six ranks as the norm for forming a battalion and marching he had it in three ranks on the battlefield. There was no place for the older, deeper six rank formations.

Figure 3.3: A Battalion drawn up according to Mackay's Rules.²³⁷

G	P	M	M	M	M	M	M	P	M	M	M	M	M	M	P	G
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

G = Grenadier
P = Pikemen
M = Musketeer

Mackay described the formation of a regiment, or battalion, of thirteen companies, including a grenadier company, see figure 3.3. All the pikemen were formed in a central division, except for eighteen who formed on each outer flank of the two divisions of musketeers. The musketeers of the twelve ordinary companies were formed into twelve platoons, six on each side of the pikemen. The grenadiers were divided into two platoons positioned on the extreme flanks. In the case of battalions that were under strength it would appear that it was considered more important to keep up the size of platoons rather than the number of platoons.

If the regiment be compleat, every company may make a plotton, which makes six Plottons upon each Wing; but if considerably weakened, a Wing may be divided into four Plottons, which ought to be the least number, to give time to charge again, and be ready by that time the Fire is round, that the Battalion, if there be occasion, may entertain a continual Fire.²³⁸

²³⁷ This drawing is schematic only. The central division of pikemen was the same size as each wing of musketeers.

²³⁸ Major General Hugh Mackay, 'Rules of War', in Anon., *The Exercise of the Foot with the Evolutions, With the Rules of War in the day of Battel, when Encountering with the Enemy*, n.p., Article VI, hereafter Mackay, *Rules of War*.

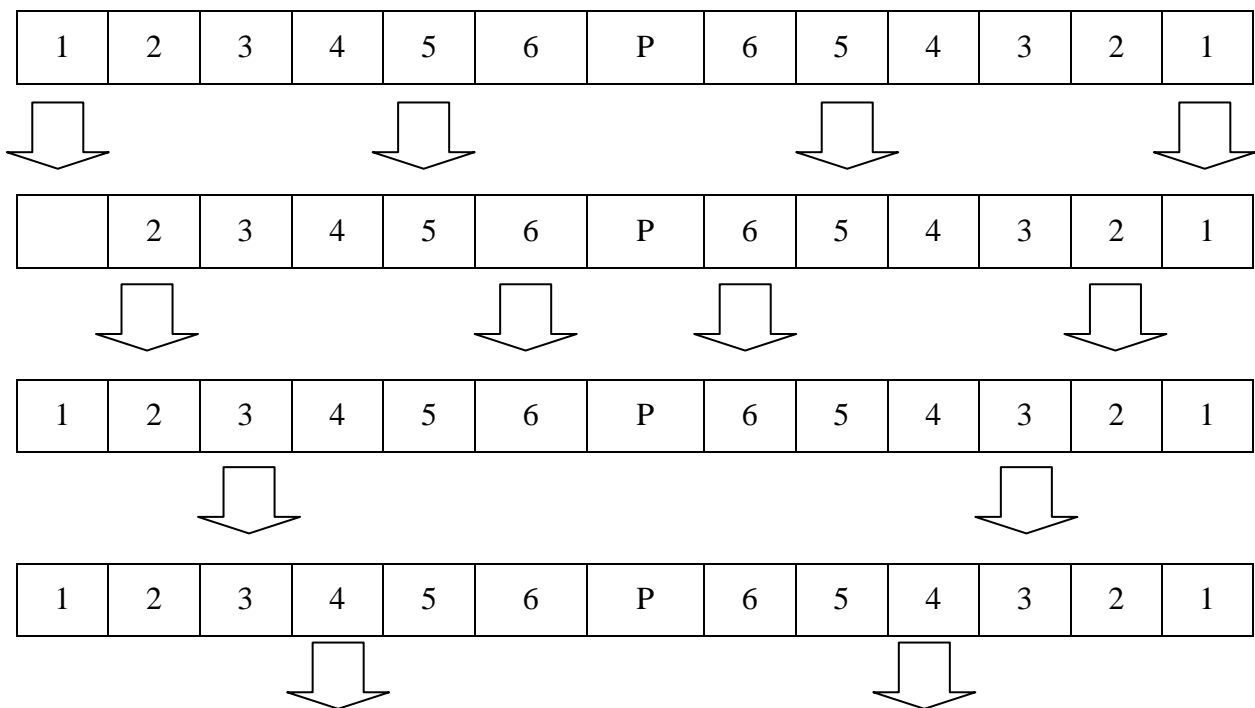
In this context the phrase 'to charge again' refers to reloading and this tells us that a platoon should be able to reload and be ready to fire again by the time the other three platoons have fired. It is also clear that sustained fire was to be achieved by each platoon firing in turn along the line of each division of musketeers rather than by the rotation of ranks to the front or by ranks kneeling so those behind could fire over them. Instead of using, as Orrery suggested, a minimum of four ranks, this method used a minimum of four platoons.²³⁹ Further, a platoon did not necessarily conform to a company and all the ranks in a platoon fired together. Thus all the three elements required for platoon firing were brought together.

The musketeer still required room for reloading the matchlock musket and, even if not hampered by a rest, the process was still a complex one and on the battlefield the use of just three orders was retained. On the command 'Make Ready' the front rank of musketeers knelt and the second and third ranks closed forwards and all prepared to fire, on 'Present' they took aim and on 'Fire' they fired. After firing and with no further orders the front rank stood, the second and third ranks stepped back to a distance of two paces between ranks and they all reloaded.²⁴⁰

²³⁹ Orrery, *Art of War*, p. 38.

²⁴⁰ Mackay, *Rules of War*, Article X

Figure 3.4: A possible firing sequence with six platoons on each flank.



As Mackay made clear, four platoons could keep up a continual fire, one after the other with the first platoon ready to fire again after the fourth fired. From this it is possible to speculate on a firing sequence with six platoons, see figure 3.4. This could have been first platoons one and five, then two and six, next three and finally four before starting all over again. The benefit of this sequence would be that fire came from both flanks of a wing of musketeers at the same time, covering the central platoons of the division, and then from the central platoons, which in turn covered the flank platoons. Thus not only was a part of the formation always loaded and ready to fire, but each platoon that was loading was protected by the fire of those platoons. However, it could be that all six simply fired in turn along the line with the first to fire having reloaded by the time the sixth fired.

In terms of weight of fire delivered this system is clearly superior to the other two methods already mentioned. A unit firing by platoons in two wings of six platoons each can deliver all its fire, in four volleys, while a unit in six ranks firing by ranks will have only fired four ranks. Moreover it can maintain a sustained fire whilst a unit firing by ranks from the rear, as the French did, has a problem once the front rank has fired, which is that the rear rank cannot fire again until the ranks in front of it have reloaded, which has to be done standing up. A unit firing by ranks rotating to the front to fire and then retiring to reload would be at a disadvantage because of the time lost through the movement of the men, whilst the men firing by platoon reloaded on the spot. A unit using platoon firing could, all other things being equal, generate 50% more fire than a unit in six ranks firing in ranks. Furthermore, being in three ranks a unit using platoon firing would be longer than a unit of the same size in six ranks and would be able to fire into its flanks. This represented a considerable improvement on the French method introduced under James II.

In describing how to fire in three ranks Mackay also gave the earliest known description of what was to become known as locking up. This is the manner in which the three ranks closed and inter-locked so that they could all fire together safely. Houlding suggests that this was not introduced until the 1720s.²⁴¹ In this he contradicts Chandler who claims it was introduced under Marlborough, but without giving any evidence.²⁴² Curiously, after Mackay, subsequent military writings make no further mention of it until the 1720s when it reappears in a drill book written by

²⁴¹ J. A. Houlding, *Fir for Service, The Training of the British Army, 1715-1795* (Oxford, 1981), p. 281

²⁴² Chandler, *Art of Warfare*, p. 119.

Humphrey Bland.²⁴³ Prior to the introduction of locking up each man in a file had stood directly behind the man in front and, in the case of the second and third ranks, fired over the head of the man in front. Whilst the man in the front rank knelt the man in the second rank had to stoop so that his head was below the level of the musket of the man behind him. In Mackay's *Rules* the second rank man placed his left foot between the feet of the kneeling man and the third rank man placed his left foot between the feet of the second rank man. This had the effect of moving each man slightly to the right of the man in front so that the third rank man could level his musket past the shoulder of the second rank man, who no longer had to stoop.²⁴⁴

When a battalion was to fire the whole line was to halt and the platoons were to fire from their position in the line. Mackay advised against advancing the platoons that were to fire ahead of the line. His argument was that doing so could result in confusion that an enemy might take advantage of.²⁴⁵ The importance of maintaining the line was again emphasised in Mackay's instructions on what to do when an opposing enemy battalion was beaten.

If by a resolute continuance and close fire, the Battalion happen to break the opposite enemy, the Officers must take special care their men do not break after them, but content themselves to make the Granadeers fire amongst them to augment their Terror and Confusion, that they may receive in good order, such of the enemy as shall come up to sustain those which you ought to have routed, This Article the more carefully to be observed that in the advancing of the Line you are subject to be flanked by the enemies Horse posted betwixt the Lines for that purpose.²⁴⁶

²⁴³ Cornwall Record Office, DD.RH.388, fol. 7, Anon, *Exercise of Firelock and Bayonet appointed by his Excie. Lieut. Genll. Ingoldsby*; British Library, Add. Ms 27, 892, fos. 209-55; Brig. Gen. James Douglass, *Schola Martis, or the Art of War*; Humphrey Bland, *A Treatise of Military Discipline* (London, 1727, 2nd edn.), p. 72.

²⁴⁴ Mackay, *Rules of War*, Article IX.

²⁴⁵ Mackay, *Rules of War*, Article X.

²⁴⁶ Mackay, *Rules of War*, Article XVIII.

Mackay is drawing attention to the need to maintain formation and the threat to infantry in a linear formation from cavalry, not attacking frontally, but attacking a flank.

Another new departure for any English or Scots drill book was the advice on managing fire control. Mackay stressed the need for the men not to present or fire without order from their platoon commander. The reason for this being

because if the battalion be attacked by horse, and the Commander, to avoid confusion, chosing rather to keep his fir whole, till they be very close, and then to fire by Plottons, upon a mint of the enemies squadrons, as break in upon his Battalion [he] think fit to cause it present without design of firing at that distance, sometimes makes the first rank of the squadron not only stoop short, but fall in confusion upon those that follow, but to bring the Souldiers to a custom of this last they must in Exercise be often accustomed, & commanded to present & recover their Arms without firing, telling them at the same time the reason for it, particularly at the same time of Action, and against Horse. The Commander judging it safest to manage his first fire, least their quick motion might prevent the second.²⁴⁷

Mackay's rules left something to be desired in terms of sentence structure and clarity, but what he was saying was that when attacked by cavalry a battalion commander may wish to make the enemy cavalry think he was about to fire by ordering his men to present, but not fire. In these circumstances the cavalry might balk at advancing further and cause confusion in their own ranks. This would allow the commander to reserve his first and usually most effective fire for when the cavalry came closer. There was always a danger that fire at too great a range would not be sufficiently effective to stop cavalry, who could then close with the infantry before they could reload. Mackay reinforced the importance of keeping a firm control on management of the fire with the following advice.

²⁴⁷ Mackay, *Rules of War*, Article X.

If the commanding Officer of a plotton, be not altogether perswaded of his Souldiers Patience and exact Obedience, as to the order of firing, to prevent a confused fire he shall march softly, according to the motions of the line, with shouldered Musquets permitting none to make ready, but such Plottons as he intends immediately shall fire.²⁴⁸

This advice also reinforced the suggestion that there was a very specific sequence in which the platoons were to fire. Clearly there were still concerns about the threat posed to infantry by cavalry, but there is also a confidence that, handled properly, infantry in line could defeat cavalry by firepower alone.

During the Nine Years War that followed the Accession of William and Mary there were a number of instances when English or Scots infantry are recorded as making use of platoon firing, several by Edward D'Auvergne who was chaplain first to the Earl of Bath's Regiment. He wrote that in August 1693, in an action near Halle, 'Sir Bevil Granville, who commanded the Earl of Bath's Regiment, marched up to the relief of this Lunenburg Regiment, bearing the enemies fire before he suffered any Platoon of his Battalion to discharge once'.²⁴⁹ He also recorded the effectiveness of platoon firing. Writing about the same action he said the French 'infantry was so harras'd by our Fire, that they seem'd unwilling at last to come to the Charge'.²⁵⁰ Clearly the doctrine of getting in close before firing was not just theoretical and was also found to be effective.

Platoon firing as defined at the start of this chapter and described by Mackay would seem to have been developed in Holland between 1678 and 1688 before being

²⁴⁸ Mackay, *Rules of War*, Article XI.

²⁴⁹ Edward D'Auvergne, *A Relation of the Most Remarkable Transactions of the Last Campaign, 1692* (London, 1693), p. 44.

²⁵⁰ D'Auvergne, *A Relation, 1692*, p. 47.

introduced to Britain in 1689. Thus, by the early 1690's the infantry of both England and Scotland had adopted the principles of the platoon fire delivery system and were making effective use of it. This meant that British infantry, with its penchant for the aggressive application of firepower at close range, would no longer be hampered by the need to choose between depth in formations to ensure continuous, but low intensity fire, or a three deep line to maximise fire but with the risk of being caught unloaded. Platoon firing in a three deep line would mean that a British infantry battalion could manage and control the rate and intensity of its fire without changing formation.

4: William III and the Nine Years War

The Accession of William III and Mary to the thrones of England and Scotland embroiled the country in the Nine Years War, 1688-1697, also known as the War of the League of Augsburg. This is a conflict which is largely overlooked by military historians in favour of the War of Spanish Succession that followed soon after it and which was dominated by the genius of the Duke of Marlborough. Chandler glosses over it in *The Art of Warfare in the Age of Marlborough* and the war's main historian, John Childs, does not address the 'how' of the British Army despite his claim that an army's 'methods are as historically vital and relevant as their institutions and personnel'.²⁵¹ What is more while many historians are aware that platoon firing was used by British infantry during this war, they draw their understanding of it from a description of an action in 1709, by which time, as will be demonstrated, it had undergone significant alteration from the form introduced in 1689.²⁵²

At the time of the Glorious Revolution of 1688 there was little difference between the drill and tactical doctrine of the French army and the armies of England and Scotland, as shown by the 1685 edition of *An Abridgement of the English Military Discipline*.²⁵³ Yet the reign of William III and the war that followed was to be a period of considerable development for the English and Scots armies where the foundations were laid for the fighting capabilities that Marlborough would later employ so effectively. Furthermore, for most of the Nine Years War this was done without the

²⁵¹ David Chandler, *The Art of Warfare in the Age of Marlborough* (Staplehurst, 1976); John Childs, *The Nine Years War and the British Army 1688-1697* (Manchester, 1991).

²⁵² Chandler, *Art of Warfare*, p. 120; Nosworthy, *The Anatomy of Victory*, p. 55.

²⁵³ See above, pp. 58-60.

assistance of Marlborough who, despite playing a major role in the revolution in support of William, was out of favour with William from 1691 and did not hold a military command again until the outbreak of the War of Spanish Succession in 1702.

This chapter will examine how platoon firing was developed, from the form introduced in 1689, how it was used on the battlefield and how its use was adapted and changed in response to the significant changes in the weapons used by British infantry during this period. These developments, however, are not readily identifiable. Following the publication in 1690 of *The Exercise of the Foot with the Evolutions*, and its 1693 Scottish edition with Mackay's *Rules*, there was no official, printed drill produced until 1728.²⁵⁴ There was also a scarcity of eyewitness accounts to allow a comparison of theory with practice and few of these writers concerned themselves more than occasionally with the detail of drill and tactics. Some provided nothing, such as Captain Blackader, whose work was little more than an account of his own piety.²⁵⁵ Despite this it is possible to produce a broad description of the developments of the last decade of the 18th century and to analyse their implications and impact.

The period of the Nine Years War was one of considerable change for the British army as, in common with other European armies, it exchanged the matchlock musket and the pike for the flintlock musket and the bayonet. During the same period bandoleers were phased out and replaced by cartridges, although priming from the

²⁵⁴ Anon., *Exercise for the Horse, Dragoon and Foot Forces* (London and Dublin, 1728).

²⁵⁵ Andrew Crichton, *The Life and Diary of Lieutenant-Colonel John Blackader* (Edinburgh, 1824).

cartridge was not yet introduced. The disadvantages of the matchlock musket when compared to the firelock have already been discussed, but the firelock's advantages can be summarised as being more certain ignition and quicker to load. When combined with the use of cartridges the firelock could achieve a rate of fire half as fast again as with the matchlock.²⁵⁶ Despite these advantages the French were particularly slow to change and Nosworthy has suggested that this was because they were preoccupied with the attack, in which they considered firepower to be less important than in defence.²⁵⁷ The gradual disappearance of the pike as a weapon of British infantry also meant that, eventually, half as many men again would be armed with muskets. Put simply, this increase in the number of muskets and the rate of fire meant that when compared to a unit of the same size from the English Civil War, an infantry unit at the end of the seventeenth century had the potential to generate in excess of double the firepower.

The narrative of these changes in equipment is far from clear, consisting of piecemeal changes carried out during the last decade of the 17th Century and the first few years of the 18th Century and as finance allowed. Chandler, however, does give an account that is sufficient to grasp the outline and further, more technical details are to be found in Blackmore's *British Military Firearms*.²⁵⁸ What neither writer does and it is really outside the scope of Blackmore's book, is to analyse what these changes meant for the firepower generated by British infantry. The departure of the pikeman also meant that a reorganisation of the battalion was necessary and,

²⁵⁶ See above, p. 73.

²⁵⁷ Chandler, *Art of Warfare*, p. 78; Nosworthy, *Anatomy of Victory*, p. 100.

²⁵⁸ Chandler, *Art of Warfare*, pp. 75-81; Howard L. Blackmore, *British Military Firearms, 1650 – 1850* (London, 1961).

consequently, changes in the organisation of platoon firing. The pike, however, was slow to disappear as there were difficulties with its replacement, the bayonet, as quickly became apparent.

Platoon firing was a relatively new development for the Dutch as well as the English and Scots and the Battle of Killiecrankie in July 1689 was the first opportunity for its use, against a Jacobite army of Highlanders. The infantry of a small Government army under the command of Lt.-Gen. Hugh Mackay was a combination of three English regiments and three regiments from the Scots Brigade in Dutch Service. In accordance with his own *Rules of War*, Mackay's infantry were drawn up three deep and the battalion commanders were ordered to 'begin their firing at the distance of 100 paces by platoons to discourage the approaching Highlanders meeting with continual fire'.²⁵⁹ This was an unusually long range at which to open fire and the reason for this was a combination of the nature of the early bayonet and Mackay's understanding of the way Highlanders fought, advancing at speed to get to hand to hand combat. As Mackay himself observed, 'if a battalion keep up [reserve] his fire till they [the highlanders] be near to make sure of them, they are upon it before our men can come to their second defence, which is the bayonet in the musle of the musket'.²⁶⁰ By opening fire at a longer range than usual, and then keeping up a 'continual fire' by platoon firing, Mackay hoped to give his infantry time to inflict casualties by fire and to fix their bayonets before the enemy closed to hand to hand combat. Mackay's own account described the fire of some of his infantry.

Hastings, the General, and Levin's regiments, which made the best fire and all the execution; particularly the General's battalion made a great fire being well

²⁵⁹ Mackay, *Memoirs*, p. 55.

²⁶⁰ Mackay, *Memoirs*, p. 52.

exercised thereto by his brother, who, being his lieutenant colonel, commanded the battalion.²⁶¹

However, the fire of the infantry, even in platoons, was insufficient to stop the charge of the Highlanders and Mackay's infantry was broken and over run.

The bayonet was to have a considerable impact on firepower as it replaced the pike, allowing pikemen to become musketeers, but initially its use was fraught with difficulties. It had made its appearance early in the second half of the seventeenth century and in its early form was of the type known as a plug bayonet, which was simply a dagger with a grip of a small enough diameter to be pushed into the muzzle of a musket. There were a number of drawbacks to this type of bayonet and the main one was that once in place the musket could not be fired, as experienced by Lieutenant General Mackay at Killiecrankie in 1689. In defence of Mackay and his unfortunate infantry it must be said the Highland charge continued to be a problem for British infantry up to the battle of Culloden in 1746. Mackay claimed that he subsequently developed a bayonet that attached to the barrel with a pair of rings that slid over the muzzle.²⁶² He mentioned in his *Rules of War* a bayonet that 'fixt without the muzzles of their Pieces', which would suggest that he wrote the *Rules* between Killiecrankie and his death in 1692.²⁶³

Brigadier-General James Douglass, in his manuscript military manual *Scholae Martis or the Arte of War...as Practised in Flanders, in the Wars, from Anno 1688 to Anno 1714*, also wrote of the problems of using the plug bayonet: 'we could never make

²⁶¹ Mackay, *Memoirs*, p. 59.

²⁶² Mackay, *Memoirs*, p. 52.

²⁶³ Mackay, *Rules of War*, Article XVII.

use of them till all our shot was spent and then we fixed the wooden hafts within ye caliber of our muskets which was of so little consequence that ye least strok upon ye barall would make them presently fly out whereof I have been often witness'.²⁶⁴

Subsequently the plug bayonet was replaced by the socket bayonet, something for which Douglass claimed credit. As a Captain at the battle of Landen in 1693 he claimed to have captured a French socket bayonet and had it copied for the use of his own Grenadier company.²⁶⁵ Instead of a wooden handle the socket bayonet had a tubular sleeve that fitted over the outside of the musket barrel. A zigzag slot in the socket engaged on a lug on the barrel, securing it in place and giving rise to the 'bayonet fitting'. This allowed the musket to be loaded and fired with the bayonet fitted and meant that it was also more firmly attached.

At the same time as the bayonet was developing and being introduced it was also being discovered that infantry did not necessarily require pikemen to defend themselves against cavalry attacks. The vulnerability of infantry to cavalry was a major consideration for as long as cavalry rode horses. The response in the seventeenth century was twofold. Firstly there was the pike, usually some five metres long, that could present a steel tipped hedge to attacking cavalry, holding them off beyond the reach of the horseman's sword or lance. Secondly there were complex formations in which the pikemen formed an all round defence with the musketeers sheltering under the pikes or between or behind the pikemen. However, as already shown, musketeers in the English Civil Wars were quite capable of defending themselves against cavalry without resorting to such formations. Despite

²⁶⁴ British Library, Add Mss 27892, f. 217v, General James Douglass, *Scholae Martis, or the Arte of War...as Practised in Flanders, in the Wars, from Anno 1688 to An: 1714*, f. 217v.

²⁶⁵ Douglass, *Scholae Martis*, f. 217v and r.

this the various editions of the *Abridgement of Military Discipline* all contained directions for forming hollow squares of pikemen surrounded by musketeers and gave detailed instructions on how to organise the firing of a square. What was missing from the instructions, however, was any actual mention of cavalry and how to deal with an attack by them.

Mackay's Rules, in contrast, contained a considerable amount of advice on how to deal with cavalry, and without resort to defensive formations based on pikemen. The key element of Mackay's advice was that the infantry should reserve their fire until the attacking cavalry 'be very close and then to fire by Plottons'.²⁶⁶ In contrast to earlier drill books Mackay's *Rules* make no mention of forming any sort of battalion square to defend against cavalry, nor were there any accounts of this happening during the Nine Years War. Mackay's *Rules* represented the common tactical doctrine of the three armies under William's control, English, Scottish and Dutch, and just how effective platoon fire could be against cavalry was demonstrated at the Battle of the Boyne in 1690 when Jacobite cavalry attacked William's Dutch Guards who were leading the attack across the Boyne and had no pikes. The Guards were isolated on the enemy side of the river and had no protection from any natural obstacle such as a hedge or ditch. William was, according to an eyewitness, extremely concerned:

But when he saw them stand their ground and fire by platoons, so that the horse were forced to run away in great disorder, he breathed out..., and said he had seen his Guards do that which he had never seen foot do in his life.²⁶⁷

²⁶⁶ Mackay, *Rules of War*, Article X.

²⁶⁷ Historic Manuscripts Commission, *Leyborne Popham Mss* (London, 1899), p. 273.

William's comment that he had never seen such an action before is further evidence of the novelty of platoon firing.

The Battle of the Boyne, a victory for William over the Jacobite army of James II, was one of the first occasions on which platoon firing was successfully tested in battle. Only days before another trial of platoon firing had occurred in Flanders at the battle of Fleurus where Dutch infantry under Field Marshal von Waldeck defeated a French force. Here the Dutch infantry demonstrated the ability of platoon firing to deal effectively with both infantry and cavalry.

For after they [the Dutch infantry] were abandoned by the horse, they also sustained the charge of French cavalry and infantry, and being attacked in front, flank, and rear, all at once, yet remained firm, unbroken and impenetrable: they let the enemy's horse approach within pistol shot of them, and then discharged with such an unconcerned and steady aim, that the whole squadron seemed to sink to the ground, scarce thirty of the whole squadron number escaping: and this course they so accustomed themselves to observe, that at length they laughed at the enemy. The French, on the other side were so confounded with the execution done upon them, that they fled as soon as the Dutch began to present their muskets.²⁶⁸

Two important points are apparent in this account. First, the Dutch infantry let the French cavalry come very close before firing and second, it became sufficient for the infantry to threaten to fire for the French cavalry to retreat, such was the effectiveness of their close range fire.

Another account tells the same story and adds that the French infantry were just as intimidated by the Dutch firepower as the cavalry.

²⁶⁸ Anon., *The Field of Mars, Being an Alphabetical Digestion of the Principal Naval and Military Engagements* (London, 1781), vol. 2, np.

So that the enemy, by their [Dutch] close and punctual Fire were so often Galled and Shattered they knew not what to do; the French Infantry could not so much as dare look them in the face.²⁶⁹

In all three of the preceding examples the infantry concerned behaved in complete accordance with Mackay's *Rules*.

Chandler comments that 'at the battle of Fleurus, it was widely noted that several German battalions using firearms alone had proved capable of repulsing French cavalry more effectively than others armed with the conventional number of pikes'.²⁷⁰ William III's army contained troops of many nationalities in addition to English, Scots and Dutch. There were troops from many German states, Spain, Sweden, Switzerland, Austria, Denmark and Brandenburg Prussia. The Prussian infantry were taught platoon firing in the Autumn of 1688.²⁷¹ It would seem reasonable to suggest that the troops from other nations were at least aware of platoon firing even if they did not adopt it or stick with it. For example, according to Nosworthy the Swedish army under Charles XII employed a tactic from 1701 called 'ga-på', literally go-on. In this they advanced in four ranks and at fifty paces the rear two ranks fired a volley. The advance then resumed with the front two ranks firing at point blank range before charging home.²⁷²

²⁶⁹ W Sawle, *An Impartial Relation of all the Transactions between the Army of the Confederates and that of the French King in their last Summer's Campaign in Flanders with a more particular respect to the Battle of Fleury* (London, 1691), p. 8.

²⁷⁰ Chandler, *Art of Warfare*, pp. 67-8.

²⁷¹ Curt Jany, *Geschichte der Preußischen Armee vom 15. Jahrhundert bis 1914. Eerster Band: Von den Anfängen bis 174*. (Osnabrück, 1967) I., 336-337 as cited in John Stapleton, *Forging A Coalition Army: William III, The Grand Alliance, And The Confederate Army In The Spanish Netherlands, 1688-1697* (unpublished doctoral thesis, Ohio State University, 2003). Jany gives 11 October 1688 as the date when Brandenburg troops officially adopted the 'Holländische Salve'.

²⁷² Nosworthy, *Anatomy*, p. 107.

Although the examples of the Boyne and Fleurus gave ample evidence of the effectiveness of platoon firing on these occasions the main protagonists were Dutch infantry. English and Scots regiments also made their presence felt in the war and clearly took to platoon firing, which they combined with their previous propensity for getting close to the enemy before firing. In 1689, the same year as Killiecrankie, at the battle of Walcourt one English battalion in particular distinguished itself. The French launched an attack that surprised the allied army under the command of Field Marshal von Waldeck while a large portion of it was foraging in the surrounding countryside. They were protected by the single English battalion of Colonel Hodges. The French attack was led by cavalry and began at about nine o'clock in the morning. *The London Gazette* carried the following graphic account.

Col. Hodges lined some convenient Hedges, and kept Firing upon them [the French cavalry] till between 10 and 11, in which time most of the Foragers were gone home. The French brought Dragoons and Foot to force Hodges from his Post, who thereupon retired to a Mill, which he maintained till he received Orders to retreat, which he did with extraordinary Bravery, still firing upon the Enemy, till he came about twelve a clock near to a little Town called Walcourt, a Mile from our Camp, and the Pass to it; where we had a Regiment of Lunenburgers, who fired very thick upon the French: so with the loss of Lieutenant Colonel Graham, Captain Davison mortally wounded, and about 30 Men killed, Col. Hodges returned to the Camp.²⁷³

This action and the actions of British troops in the ensuing battle earned nothing but praise, von Waldeck expressed surprise, 'Mons. The Colonel Hotzes [Hodges] and the English, who are with him, have accomplished miracles, and I would never have believed so many of the English would show such a joie de combattre.'²⁷⁴ Although it is not explicitly stated that Hodges' battalion was using platoon fire it is unlikely they were using anything else, given its official status.

²⁷³From the Dutch camp near Walcourt, August 26, *The London Gazette*, No. 2482, 22nd August to 26th August 1689.

²⁷⁴David Chandler, *Marlborough as Military Commander* (London, 1973), p. 13.

At the battle of Steenkirk in 1692 it was William's infantry who were on the offensive and the French who had the benefit of hedges. The battle was something of a disaster as William was unable to properly support the English infantry who led the attack on the French; the result was that despite their success the battle was a bloody defeat. The English infantry, however, further enhanced its reputation and demonstrated that they were still perfectly capable of closing with the enemy to make their musket fire tell. D'Auvergne described how

Sir Robert Douglass, with his first Battalion, charg'd several of the Enemies, and beat them from three several Hedges, and had made himself Master of the fourth, where going through a Gap to get on the other side, he was unfortunately kill'd upon the spot; all the other Regiments performing equal wonder, and behaving with the same Bravery, and beating the Enemies from their Hedges so far, that in this Hedge-fighting their fire was generally Muzzle to Muzzle, we on the one side, and the Enemy on the other.²⁷⁵

Close range fire was again being employed, this time offensively. The British infantry were closing with the French, who were protected by hedges, successfully engaging them at extremely close range and forcing them to retreat. The example of the Earl of Bath's Regiment has already been given, but includes the detail that the French fire was deliberately ignored in order to get close.²⁷⁶

The infantry also demonstrated a considerable amount of discipline and fire control in the subsequent withdrawal.

The night drawing on, the King order'd the Army to retreat, which was done with admirable Order; for tho' the French did follow us for some time, yet they did not fire a shot, such was the order of our Retreat that they did not dare venture upon it; the English Grenadiers brought up the Rear, and whenever the French mov'd towards us, they fac'd to the Right about, and presented

²⁷⁵ D'Auvergne, *A Relation*, 1692, p. 42. D'Auvergne wrote a series of annual accounts of events in Ireland covering the years 1691 to 1697, each published in either the same or subsequent year as that covered. During this time he served as a chaplain, first to the Earl of Bath's Regiment and then the Scots Guards.

²⁷⁶ D'Auvergne, *A Relation*, 1692, p. 44.

themselves to the Enemy; then the Enemy would halt, and so our Rear-Guard then march'd on; this halting and facing, and then marching, continu'd for some time.²⁷⁷

Again, this passage shows a close adherence to Mackay's Rules, presenting muskets as if intending to fire, and that although the British were retreating the French were sufficiently wary of their fire capabilities that they kept their distance.

The increased firepower generated by platoon firing combined with the introduction of the socket bayonet meant that there was no longer a need for pikemen and over the course of the Nine Years War they were gradually reduced in numbers. Childs has suggested that the ratio of muskets to pikes increased from 2:1 in 1689 to 3:1 by 1697.²⁷⁸ Certainly by 1702 it would seem that the intention was that infantry regiments should have given up their pikes. Six regiments of infantry going to Ireland in June 1702 all received the same instruction.

Her Majesty's pleasure is that all pikes already issued to the Regiment of Foot under your command be returned to the Stores of Ordnance, in lieu of a sufficient number of muskets which you are to receive out of the said stores.²⁷⁹

The way that infantry fought and carried out platoon firing at the start of this period was clear from Mackay's *Rules*. The disappearance of pikes, however, gives rise to the question of how regimental organisation and the management of platoon firing were consequently affected. Brigadier-General Douglass' manuscript military manual, *Scholae Martis*, contained very detailed directions on drill and platoon firing by battalions without pikes.²⁸⁰ The difficulty is that the manual was, obviously, written

²⁷⁷ D'Auvergne, *A Relation*, 1692, p. 42 and p. 45.

²⁷⁸ Childs, *Nine Years War*, p. 76

²⁷⁹ Chandler, *Art of Warfare*, p. 68

²⁸⁰ Douglass, *Scholae Martis*, ff. 290-296

at some time after 1714 and there was no date given for when the drill described was in use during the twenty six year period covered by the title.

Douglass' drill is certainly later in date than Mackay's. When Mackay's *Rules of War* appeared it was published as part of *The Exercise of the Foot with the Evolutions*.²⁸¹ In this the drill for musketeers, individually and as part of a battalion, was using the matchlock musket. The drill for the firelock musket was given as a separate section. There was also pike drill. In Douglass' manuscript battalions were completely armed with firelock muskets and socket bayonets. There was no mention of matchlocks and he used the phrase 'since the pikes were out of use', which indicates a date for the drill after the end of the Nine Years War.²⁸² He also had each company making a platoon, which echoed Mackay.²⁸³ As will be shown, by 1708 it had become the practice in the British Army to divide battalions into fifteen platoons, regardless of the company organisation, which places Douglass' drill before that date. That is if it was a British drill and not a Dutch one. Prior to 1701 Douglass had been serving in Holland with the Scots Guards, but was then appointed Lieutenant Colonel of Aeneas Mackay's regiment of the Scottish Brigade in Dutch service.²⁸⁴ As will be shown, the Dutch method of platoon firing remained much as Douglass described it up to the end of the War of Spanish Succession in 1714. He also included in his manuscript various 'evolutions' or drill manoeuvres that were abandoned in 1708 by the British army. If he was writing a Dutch manual it could have been reflecting their practice for anytime from 1700 up to 1714, but it would not be unreasonable to

²⁸¹ Anon., *The Exercise of the Foot with the Evolution*, (Edinburgh 1693)

²⁸² Douglass, *Scholae Martis*, f.210v.

²⁸³ Douglass, *Scholae Martis*, f.229v and Mackay, *Rules*, Article VI.

²⁸⁴ Charles Dalton, *English Army Lists and Commission Registers, 1661-1714* (London, 1898), vol. iv, p.193.

expect a Dutch manual to have been written in Dutch. Perhaps most tellingly, however, he described how to salute the King. This must be a reference to William III, who died in March 1702 and was succeeded by Queen Anne. This evidence points to the turn of the century as the date for when the drill described by Douglass was in use.

As William III was head of both the Dutch army and the English and Scots army it is reasonable to assume that the same drill, as described by Douglass, was in use in both armies at that time. This assumption is supported by sections of the manual where Douglass described differences between the Dutch and British organisation of grenadiers and how to allow for that in the drill, so it could be used by either army.²⁸⁵

Douglass' instruction on firing included details on the order of firing of the platoons.

Let the firing begin from y^e two extream plotouns upon ye rig^t and left of ye Battallion and so continue sucesivly firing till you end in ye centre...But if a continuall fire must be kept as in Battell reqd after ye plotouns have fired they must immediatly loadd againe & shoulder till ordered by ye Capt to make ready etc and this is done in advancing and retearing as well as standing.²⁸⁶

The firing order of the platoons was specified and simple, it was from the flanks to the centre, gone was Mackay's suggestion of a more complex order of firing.²⁸⁷ In the other respects of reloading immediately and his comment about advancing, retiring and standing he echoed Mackay. Mackay's suggestions that the best shots be held in reserve and that the Grenadier platoons could be hidden behind the flanks of a battalion had also gone, further simplifying the drill.²⁸⁸

²⁸⁵ Douglass, *Scholae Martis*, ff.217v and 232v.

²⁸⁶ Douglass, *Scholae Martis*, f. 229v.

²⁸⁷ Mackay, *Rules of War*, Article XI and Douglass, *Scholae Martis*, f. 229v.

²⁸⁸ Mackay, *Rules of War*, Articles XIX and XX.

Douglass also instructed that the men in each rank were to stand with the files at close order, that was 'shoulder to shoulder, but so as they can be master of their Arms'.²⁸⁹ This was closer than specified in the *Exercise of the Foot* that also contained Mackay's *Rules of War*, there the distance between files when firing was given as half a pace.²⁹⁰ This closing up was undoubtedly a result of exchanging the matchlock for the flintlock and had the effect of concentrating a battalion's fire over a narrower front. Both *The Exercise of Foot* and Douglass said the distance between ranks 'either standing or marching is 4 paces'.²⁹¹ Although the number of movements required to load and fire a firelock musket was fewer than for a matchlock the use of just the commands 'make ready', 'present' and 'fire' continued in use in action. On the order 'make ready' the ranks closed, the front knelt, the middle stooped and the rear stood, all cocking their muskets. On 'present' they levelled their muskets and then came 'fire'. After firing the ranks were to open 'backwards to 2 paces distance that they may have room to charge or load their arms again without expecting any word of command for ye same'.²⁹²

Douglass also included a revised version of Mackay's *Rules* that gave an indication of how combat practices had changed over the course of the Nine Years War. In many places Douglass' *Rules* used the same wording as Mackay, although elsewhere he improved on their intelligibility and simplified some of them. In general the content of both sets of rules was the same, but there were a few differences. For

²⁸⁹ Douglass, *Scholae Martis*, ff. 209v and 229 v.

²⁹⁰ Anon, *The Exercise of Foot* (Edinburgh, 1693), p. 62.

²⁹¹ Douglass, *Scholae Martis*, f. 209v and Anon, *The Exercise of Foot*, (Edinburgh, 1693), p. 62.

²⁹² Douglass, *Scholae Martis*, f. 233r.

instance, Douglass made no mention of locking up, instead he reverted to the older method of the second rank stooping to fire over the heads of the kneeling front rank with the third rank standing to fire over the heads of the second rank.²⁹³

Douglass also discussed dealing with cavalry in a much simpler, clearer way, while retaining the need for close range fire and being able to present without firing.

If the battallyon be charged with a body of Cavallry, the commanding officer shall keep up his fire until the horse be very close and then to fire either by rank or plotouns as he thinks proper.²⁹⁴

The Enemy in this case will now and then come briskly up as if they designed to fall in with you, although they doe not designe itt, but only to try what countenance you mak, and in such occurancys the Commanding officers must cause the whole Battallion present without any designe of firing wher with beforehand he is to advertise ye officers, and that will redaly make ye first Rank of ye Squadrons not only stoup but fall in confusion upon those that follow.

And to bring his souldiers to some expertness in this they must be often commanded to present ther Arms and againe recover without firing telling them ye reason for it.²⁹⁵

That this theory was put into practice was seen during the retreat of William's allied army following its defeat at Landen in 1693.

Lieutenant-General Talmash had the care to bring off the English Foot of the main Body by Dormal, which he did with as much Prudence as he had before fought with Bravery... As the Enemy offer'd to trouble his Retreat, he made the Battalions face, and Present to them, and then they halted, unwilling to feel any more the fire of our Foot.²⁹⁶

Clearly the ability to not fire at close range was as important as actually firing.

²⁹³ Douglass, *Scholae Martis*, f. 229v.

²⁹⁴ In this context to 'keep up' fire means to reserve it rather than the modern meaning of continuing to fire.

²⁹⁵ Douglass, *Scholae Martis*, f. 233r.

²⁹⁶ Edward D'Auvergne, *The History of the Last Campagne in the Spanish Netherlands, Anno Dom. 1693* (London, 1693), p. 78.

During the course of the Nine Years War large numbers of new troops were raised, either for new units or to replace casualties, who all needed to be trained quickly.²⁹⁷ Not all units would have had the training and experience of regiments such as the Dutch Blue Guards. As well as demonstrating how the disappearance of pike men was dealt with, it is also possible that Douglass' manual represented a simplified version of drill and tactics pared down to the necessary basics in order to avoid confusing newly raised troops. However, it was with this drill and method of platoon firing that the British army under Marlborough started the War of the Spanish Succession.

A significant difference between the tactical methods of the Nine Years War and those of the English Civil War and the campaigns following the Restoration of 1660 is the apparent abandoning of the infantry assault following close range fire. Mackay states, and Douglass copies almost word for word; 'If by a resolute continuance and close fire, the Battalion happen to break the opposite enemy, the Officers must take special care their men do not break after them, but content themselves to make the Granadeers fire amongst them to augment their Terrour and Confusion.'²⁹⁸ This emphasis on beating the enemy by firepower has been seen as indicating an abandonment of the infantry assault. As Chandler writes;

In the 1690s it became rare for infantry to fight hand-to-hand with their opponents, although there were of course notable exceptions such as Steenkirk (1692) where the English and Dutch battalions were divided from the French only by hedgerows. Generally speaking, however, commanders deemed their foot to be a source of more or less static fire-power once they

²⁹⁷ Childs, *Nine Years War*, pp.72-74.

²⁹⁸ Mackay, *Rules*, Article XVIII and Douglas, *Scholae Martis*, f. 233r.

had moved ponderously up into musket range, relying on the wheeling horsemen to decide the ultimate issue.²⁹⁹

Some explanation for the abandonment of the previously highly successful tactic of following a close range volley with a charge to hand to hand combat can be found in Mackay and Douglass. They both drew attention to the importance of not breaking the line to pursue a broken enemy unit in case, as Douglass wrote, 'you come to be flanked in yt irregular action by troupes ye Enemie may have posted betwixt yr lines for that purpose'.³⁰⁰ Mackay used much the same words.³⁰¹ To close with the enemy to hand to hand combat would inevitably leave a battalion in some confusion, making it extremely vulnerable to counter-attack. Thus the infantry chose to rely upon firepower to break an enemy. That they were able to do so was a result of the changes that had taken place since the English Civil War. During the Civil War infantry regiments were not able to generate long range, sustained fire that was also effective and decisive. On the other hand an infantry regiment that advanced to point blank range and maximised its fire had little choice but to close to hand to hand immediately after firing. With all its fire delivered in one go and with reloading taking so long, to do otherwise would leave it vulnerable. By contrast a battalion at the end of the century could not only deliver more fire more rapidly at any range, but because of platoon firing it was sustainable fire, there was always some part of it that was firing and thus protecting those parts that were reloading. Furthermore, as suggested by Mackay, the fire of the front rank could be reserved and the battalion would still be able to generate a considerable amount of continuous platoon fire and be protected

²⁹⁹ Chandler, *Art of Warfare*, p. 111.

³⁰⁰ Douglas, *Scholae Martis*, f. 233r.

³⁰¹ Mackay, *Rule of Wars*, Article XVIII.

by the front rank with bayonets fixed.³⁰² As Douglass wrote, and at the same time summed up the different roles of the infantry and the cavalry:

For now, in our modern way of fighting viz: by platouns alternativly firing, it is not aloud ye Infantry to fall in pell mell amongst any troups in confusion, least therby they bring themselves in to ane equall disadvantage an so change the smyles of fortune in to frouns and threats of loss, therfor whatever confusion ye Enemy may be in the Infantry ar not to brake ther Ranks to persheu but ar still to march softly on in full body closing ther files and making up ther Ranks as the men drops, and so re never out of condition of Battalling or Sustaining wher its requied leaving the accomplishment of the victory to ye Cavalry giving no quarters till ye victory is determined.³⁰³

Mackay, however, did write about the use of the bayonet:

That such Regiments as are provided of good Bayonets, fixt without the muzzles of their Pieces, may in approaching to the due distance of firing, cause the first rank of the whole Battalion to fix their Bayonets and continuing their march till they be close upon the Enemy, make the first rank kneel with the points of their Bayonets upon the Ground, and the other two Ranks closed up, fire over their heads upon the Enemy, who supposing readily all the fire spent, if he happen to stand it, will come up the bolder to your Battalion, who receiving him with the [fire of the] first Rank, second with the push of pike and Bayonet, will readily break him whether horse or Foot.³⁰⁴

Mackay included the need to 'be close upon the enemy' before firing, but rather than maximising the infantry's fire power, held the front rank fire in reserve in case of a counter attack, in which case the front rank was to fire and then charge, or present, their bayonets at the same time as the pikemen charged their pikes. It was a description of the bayonet used defensively, just as the pike was, and suggests that the bayonet was seen as an alternative to the defensive qualities of the pike and that its offensive qualities had not yet been recognised.

³⁰² Mackay, *Rules of War*, Article XVII.

³⁰³ Douglass, *Scholae Martis*, f 253 v.

³⁰⁴ Mackay, *Rules of War*, Article XVII.

Douglass omitted any such advice on the use of the bayonet from his version of the *Rules*, although he did record his role in copying the socket bayonet from the French and comment on its superior qualities as a weapon compared to the plug bayonet.³⁰⁵ Writing of the battles of Fleurus, Steenkirk and Landen he described how the French socket bayonet was a 'great advantage' as it meant the French 'both push'd and fired at once' and was 'a much better defence than our pikes wer'.³⁰⁶ Again the bayonet was clearly seen as a defensive weapon.

Chandler wrote, in a comment later echoed by Nosworthy, 'many contemporaries spoke with awe of the fury of the initial French fire in action, although its continuity and effectiveness tended to fall off rapidly after the initial discharge'.³⁰⁷ As already discussed, the French fired by ranks, and during the Nine Years War, when they habitually formed five ranks, they could deliver all their fire in two volleys of three and two ranks. Whilst this did result in a very heavy fire it also resulted in reloading problems once all the ranks had fired.³⁰⁸ From contemporary accounts it would also appear that French infantry opened fire at a greater distance than British infantry, allowing the British to get closer to the French, who were presumably busy reloading, before delivering their own, heavy and sustainable platoon firing.

A number of examples of this are available. Although it occurred against Jacobite Irish infantry Story recorded one instance; 'As our men advanced up the hill, the Irish fired a whole Volley upon them, and then set up the Huzzah, but scarce killed a Man,

³⁰⁵ Douglass, *Scholae Martis*, ff. 211r and 217v.

³⁰⁶ Douglass, *Scholae Martis*, f.217 r.

³⁰⁷ Chandler, *Art of Warfare*, p. 114-115 and Nosworthy, *Anatomy of Victory*, p. 60.

³⁰⁸ See above, p 85.

(for they shot over them) our Men however went on till they were got within Pistol-shot of them, and then fired, by which they galled the Irish, that they immediately run.³⁰⁹ It is notable that the Irish are recorded as firing a 'whole volley' and no more. Presumably they were trying to reload as the English infantry advanced and then fired within pistol range. The example of the Earl of Bath's regiment under Sir Bevil Granville has already been given as it 'marched up to the relief of this Lunenburg Regiment, bearing the enemies fire before he suffered any Platoon of his Battalion to discharge once'.³¹⁰

There is no doubt that the English and Scots continued to deliver their fire at close range. This was clear from the account of the fighting at Steenkirk already quoted and the actions of the English regiments in the victory over the Jacobites at Aughrim in 1691. 'The Irish at their near approach to the Ditches, fired upon them, but our Men contemning all Disadvantages, advanced immediately to the lowest Hedges, and beat the Irish from thence.'³¹¹

Platoon firing was extremely effective in a firefight where both sides sought to overwhelm the other by fire alone and one side, as the French did, chose to fire by ranks in a deep formation. It did not, however, always win the day. At Killiekrankie the Highlanders' tactic of firing a single volley and then rushing in, sword in hand, allowed them to overwhelm Mackay's infantry in hand to hand combat even though they suffered heavy casualties from the fire of his infantry.³¹² Similarly at the battle of

³⁰⁹ Story, *History of Ireland* (1691), p. 54.

³¹⁰ D'Auvergne, *Campaigne 1692*, p. 44.

³¹¹ Story, *History of Ireland*, pp. 129-30.

³¹² Mackay, *Memoirs*, pp. 52, 55 and 59.

Fleurus not all the fighting had gone in favour of the Dutch infantry. No less an authority than Maurice de Saxe in his *Reveries* described how platoon firing could be defeated in a manner not very different from that of the Highlanders at Killiecrankie.

It was an established maxim of M. de Greder, a man of reputation, and who has for a long time, commanded my regiment of foot in France, to make his men carry their firelocks shouldered in an engagement; and in order to be still more master of their fire, he did not even suffer them to make ready their matches: thus he marched against the enemy, and the moment they gave their fire, he threw himself, sword in hand, at the head of the colours, and crying out *Follow me!* rushed at once upon them. By this method he defeated the Frise guards at the battle of Fleurus, and was also successful on all other occasions.³¹³

In 1693 French infantry under Marshal Catinat in Italy stormed Austrian positions with the bayonet. The effect of these events is summarised by Chandler.

Such success, however, encouraged French generals of several generations in the belief that the true metier of the French foot was cold steel – and this assumption led them to disregard the refinements of infantry fire tactics, with what proved to be near-fatal results in the following war.³¹⁴

Amongst the French generals who subsequently sustained this belief in cold steel was the Marechal de Saxe, whilst the influential writer Folard also adhered to it.³¹⁵

French offensive tactics attached little importance to firefights conducted at a distance, every effort being made to approach the enemy and overthrow them with the threat of the bayonet or drawn sword.³¹⁶

The French remained content to rely on the bayonet and, despite its drawbacks, their version of firing by ranks. In contrast the British adopted an approach that emphasised firepower.

³¹³ Comte Maurice de Saxe, *Reveries or Memoirs concerning the Art of War*, Trans. By Sir William Fawcett (Edinburgh, 1759), p. 31.

³¹⁴ Chandler, *Art of Warfare*, p. 113.

³¹⁵ Chandler, *Art of Warfare*, pp. 131 and 133.

³¹⁶ Nosworthy, *Anatomy of Victory*, p. 61.

Although often overshadowed by the war of Spanish Succession, the Nine Years War represents a pivotal period in the development of the firepower capability of British infantry. During this period the pike disappeared and was replaced by the bayonet, which increased the number of soldiers with muskets by half as many again. The matchlock was replaced by the flintlock, which was more reliable and quicker to load and fire. The speed of loading was further increased by the introduction of the cartridge in place of the bandoleer. The resultant increase in firepower was, at the same time, delivered by means of platoon firing, which allowed the full potential of the increase in available firepower to be realised by giving a battalion commander a range of options on how to deliver his battalion's fire.

A battalion could now fire one of its twelve platoons every few seconds and still have the first platoon to fire reloaded and ready to fire again by the time all twelve had fired. Depending upon circumstances this rate of fire could be slowed down if sustainable fire was required over a long period of time. The option also existed for a battalion commander to fire only a given number of his platoons or to fire all his platoons together in a battalion volley. A further option was to fire only the second and rear ranks, in any of the ways mentioned, keeping the entire front rank as a reserve. Furthermore, British infantry retained its ability to sustain the enemy's fire and get close before delivering its own fire, although the bayonet was, in the drill books at least, seen as a defensive rather than offensive weapon.

Despite these advantages platoon firing was not an inevitable battle winner. It was vulnerable to a rapid assault, as at Killiekrankie and Fleurus, and to being overwhelmed by sheer weight of numbers, as at Landen in 1693. Outnumbered

approximately three to two the Confederate Army of William finally collapsed when it could no longer keep the French at bay with musketry.

The elector upon the Right, order'd two Battalions to Charge the Enemy in Front, whilst three others should Charge them upon their Left Flank... The two Battalions, one Dutch and t'other of Scots Gurds, which the Elector had commanded to Charge the Enemy in the Front, had spent all their Ammunitions by their continual Fire for so many hours: The Elector order'd to have Ammunition brought them, but it could not time enough to do business.³¹⁷

This failure was attributed to a lack of ammunition rather than any failing in the men or tactics. However, its ability with this new fire system was usually enough to allow British infantry to overcome its usual enemy of the time, the French. It was also sufficient to deal with frontal cavalry attacks.

Platoon firing as described by Lieutenant General Mackay had been developed at a time when a third of a battalion was made up of pikemen and the musketeers were armed with matchlocks and loaded from bandoleers. Although the disappearance of the pike and the introduction of the flintlock musket and the cartridge led to minor adaptations in the way that platoon fire was delivered it remained basically unchanged and was the fire delivery system that the British infantry took into Flanders at the outbreak of the War of Spanish Succession in May 1702. A battalion in line formed its dozen line or hat companies into a dozen platoons in two wings of six. The platoons fired in turn from the flanks to the centre, starting with the right hand platoon of the right wing, followed by the left hand platoon of the left wing and alternating platoons on the right and left until the two platoons in the centre fired. The Grenadier company was divided into two and formed a platoon on each flank. They appear to have operated almost independently of the main body. By the end of that

³¹⁷ D'Auvergne, *Campagne 1693*, p.72.

war, however, platoon firing had undergone a major change that took advantage of the improvements in weapons and the resultant increase in potential firepower.

5: The Age of Marlborough, 1702 to 1714

It is the view of David Chandler, writing about the Duke of Marlborough, that 'England has never produced a greater soldier'.³¹⁸ Field Marshal Montgomery of Alamein's assessment is that,

Of all the military personalities who pass across the stage during his times...Marlborough was the greatest.... I have always considered that it was he who was responsible for the rise of the British army to become one of the foremost armies in Europe.³¹⁹

Marlborough's praises have been sung by military historians such as Richard Holmes, John Keegan, Andrew Wheatcroft and J W Fortescue.³²⁰ But in studying the man and his campaigns historians have tended to ignore the detail of how Marlborough's battles were fought and concentrate instead on the narrative of events, analysing his strategies and manoeuvres. Yet, regardless of Marlborough's brilliance, the battles were ultimately decided by the outcome of the combat between battalions and squadrons in which technique was critical. As John Houlding put it; 'We are too easily dazzled by the brilliance of Marlborough's grand-tactical dispositions, the more so when these are contrasted with those of William; Marlborough's victories were the fruit of the military genius of the commander, and not of any radical departure in the drill and tactics (save for platoon-fire) of the individual corps under his command.'³²¹

³¹⁸ David Chandler, *Marlborough as Military Commander* (London, 1973), p. 331.

³¹⁹ Montgomery of Alamein, *A History of Warfare* (London, 1968), p. 291.

³²⁰ Richard Holmes, *Marlborough, Britain's Greatest General* (London, 2008); John Keegan and Andrew Wheatcroft, *Who's Who in Military History* (London, 1976); J W Fortescue, *A History of the British Army* (London 1910, 20 vols.).

³²¹ Houlding, *Fit for Service*, p. 174.

Marlborough's greatness is not in dispute and, as Houlding demonstrates, there was little change after the Glorious Revolution of 1688 in the way the British army operated tactically, except, vitally, for the introduction of platoon fire.³²² However, using this new combat technique, British infantry, and their allies the Dutch, repeatedly punched above their weight on the battlefield in the face of frequently numerically superior French forces. In order to explain the success of British infantry it is necessary to look past the brilliance of Marlborough and understand what was happening in the ranks and files of his battalions.

The importance of platoon firing is clear in the views expressed by Houlding. 'By the time of Blenheim a new fire-tactics – the famous platoon-fire system – had established itself as the forte of the British foot.'³²³ Houlding also states 'that a sound appreciation of the supremacy of firepower over all other forms of combat had been a lesson well learned by the end of Marlborough's campaigns, and had been taken to heart in the army'.³²⁴ Furthermore, although platoon firing was learnt from the Dutch, the British army first made it its own and then, after William's death in 1702, further developed it whilst the Dutch platoon fire changed hardly at all. It was thus at the very heart of the success of the British army under Marlborough. However, despite this fundamental importance, the way platoon firing was organised and carried out and how it continued to develop under Marlborough has not been accurately described nor its application analysed.

³²² Houlding, *Fit for Service*, pp. 172-74.

³²³ Houlding, *Fit for Service*, p.174.

³²⁴ Houlding, *Fit for Service*, p.167.

In his *Art of Warfare in the Age of Marlborough*, covering the period of 1688 to 1748, Chandler's aim is 'a fairly full examination of how the regimental officer and soldier fought and manoeuvred' and he achieves a great deal of success.³²⁵ However, as he deals with all arms and the major European nations it is perhaps not surprising that he does not get down to the detail of how Marlborough's own army fought. Furthermore, whilst grasping Marlborough's strategic and tactical abilities, he fails to fully appreciate the nature of platoon firing. He understands that platoon firing 'developed over a considerable number of years', and that it changed during this period.³²⁶ However, he does not identify its original form or how it developed, quoting Kane's version as representing 'English usage' during the War of Spanish Succession.³²⁷ In this misunderstanding he is in company with others, such as Nosworthy.³²⁸ Like Chandler he bases his description of platoon firing on a combination of an account of one particular firefight, at Malplaquet in 1709, and Kane's instructions. These views of the nature of platoon firing during the War of the Spanish Succession are generally accepted by historians, but are wrong.

As has been shown above, neither of the sources drawn on by Chandler and Nosworthy described the way platoon firing was conducted at the start of the war.³²⁹ This was also quite different from what was described at the battle of Malplaquet in 1709. This chapter will identify how and when the organisation of platoon firing changed, something not recorded in any publication at the time and which has

³²⁵ Chandler, *Art of Warfare*, p. 9.

³²⁶ Chandler, *Art of Warfare*, p. 117.

³²⁷ Chandler, *Art of Warfare*, p. 117.

³²⁸ Nosworthy, *Anatomy of Victory*, pp. 55-57.

³²⁹ See above, pp. 66 and 102-05.

eluded historians. It will show that there was a very significant change in the conduct of platoon firing by 1709 and that there were also differences between the conduct of platoon firing in that 1709 firefight and what Kane later advocated.

In 1708 *The Duke of Marlborough's New Exercise of Firelocks and Bayonets* was published, but this was not an official publication and only dealt with drill and not how firing was to be conducted.³³⁰ Fortunately a number of manuscripts and letters survive that record the steps in the development of platoon firing through this period. There was also a scarcity of eyewitness accounts to allow a comparison of theory with practice and few of these writers concerned themselves more than occasionally with the detail of drill and tactics. However, there are sufficient first hand descriptions to allow an analysis of platoon firing in practice.

Despite his fall from favour with William III in 1692, Marlborough was politically and militarily rehabilitated by the eve of the War of Spanish Succession, 1701-1714. The two men worked together to prepare for the conflict, but, following a riding accident, William died in March 1702 to be succeeded by Queen Anne. The most obvious effect of this was to elevate Marlborough to the position of Commander in Chief of the English and Scots armies. Less obviously it broke the link that had existed between the English, Scots and Dutch armies when William was head of state and commander in chief of all three.

³³⁰ Anon., *The New Exercise of Firelocks & Bayonets; Appointed by his Grace the Duke of Marlborough to be used by all the British Forces* (London, 1708).

The first major engagement of the war for the British army was the storming of the Schellenburg on 2 July 1704. As part of Marlborough's campaign that culminated in the battle of Blenheim, it was necessary to acquire a suitable base for supplies. Accordingly a plan was laid to capture Donauworth on the Danube. The town and defences of Donauworth were dominated by the Schellenburg Heights and capturing those was the key to the town. The fight for the Schellenburg subsequently became synonymous with vicious hand to hand fighting where there was little opportunity for the disciplined and controlled application of platoon fire. Perhaps the most vivid description came from one of the French defenders, whose account left no doubt that the British infantry had not lost any of their stomach for hand to hand fighting.

It would be impossible to describe in words strong enough the details of the carnage that took place during this first attack, which lasted a good hour or more. We were all fighting hand to hand, hurling them back as they clutched at the parapet; men were slaying, or tearing at the muzzles of guns and the bayonets which pierced their entrails; crushing under their feet their own wounded comrades, and even gouging out their opponents' eyes with their nails, when the grip was so close that neither could make use of their weapons. I verily believe that it would have been quite impossible to find a more terrible representation of Hell itself than was shown in the savagery of both sides on this occasion.³³¹

Eventually the defences of the Schellenberg were penetrated and the heights were captured. The garrison of Donauworth itself abandoned the town without a fight.

At the subsequent battle of Blenheim the British infantry were able to demonstrate their courage, discipline and platoon firing to their full effect.³³² The right flank of the French army rested on the banks of the Danube and the village of Blenheim. The village was held by sixteen battalions with another eleven in reserve supported by

³³¹ Walter C Horsley (trans.), *The Chronicles of an Old Campaigner, M. De La Colonie, 1692-1717* (London, 1904), pp.184-85.

³³² David Chandler, *Marlborough as Military Commander* (London, 1973), pp. 141-51; Holmes, *Marlborough*, pp. 282-96; Spencer, *Blenheim*, pp.229-91.

twelve squadrons of dragoons, many dismounted. The first attack on the village was made by the five British battalions of Rowe's Brigade who were at the head of Lord Cutt's column. A vivid account of this attack was written by a chaplain, Josiah Sandby. It began with Brigadier Rowe leading his Brigade against Blenheim.

And he had proceeded closely and slowly within 30 paces of the Pales about Blenheim before the enemy gave their first fire, and when this was given there fell a great many brave officers & soldiers on our side, but yet that did not discourage that Excellent officer Brigadier Rowe from marching directly to the very Pales, in which he stuck his sword, before he suffered a man to fire a piece & then our men gave the first volley in the teeth of the enemy. His orders were to enter sword in hand, but the superiority of the enemy & this advantage of the post made y^t impossible. And therefore this first line was forced to retire, but without the Brigadier who was left by the side of the Pales by a shot he had received in his thigh. This was a great disadvantage to the service at the first beginning & his own Lt Col and Maj who but knew his worth endeavouring to fetch him off were both killed upon the spot.³³³

The loss of the three most senior officers of a single British battalion in this attack is an indication of the ferocity of the fire that the French were able to generate. Despite this the account shows a determined adherence to the principle of getting in close to maximise the effectiveness of musketry. The French fired at thirty paces, the British even closer, possibly at as little as five metres. This was followed immediately by an attempt to storm the defences of the village, which failed.

Unfortunately for Rowe's Brigade they were attacked by French cavalry as they retreated.

The Hessian Brigade, pursuant to orders, made ready to renew the attack: But while this was doing some Squadrons of the Gens d'Armes fell in upon the Right of Rowe's Brigade, put two Regiments in disorder, & took the Collonels Collours of Rowe's Regiment, upon which the Hessians in the second line, facing to the right, charged those Squadrons so warmly that they repulsed them & retook the Colours.³³⁴

³³³ BL Add Mss 61408, Josiah Sandby, *Journal*, f. 159.

³³⁴ BL Add Mss 61408, Josiah Sandby, *Journal*, f. 159.

This incident demonstrates exactly the danger of infantry having a flank exposed to a cavalry attack, but that cavalry could be equally vulnerable to formed infantry facing them frontally.

The fight for Blenheim village continued throughout the battle with the British infantry and their allies unable to capture it. Neither, however, could the French mount a counter-attack to drive off the British and Allied infantry.

The attack then increased in vigour and the enemy were driven into the village, where they were too numerous to act, being wedged up into a dense mass so that our well directed fire produced a murderous effect. We retired about 80 or 90 yards and plied them so warmly with our platoons that they were cut off as fast as they attempted to leave the village to put themselves in order to attack us.³³⁵

The account of Robert Parker confirms the effectiveness of the platoon firing.

The enemy also made several attempts to come out upon us: But as they were necessarily thrown into confusion in getting over their trenches, so before they could form into any order for attacking us, we mowed them down with our platoons in such numbers, that they were always obliged to retire with great loss; and it was not possible for them to rush upon us in a disorderly manner, without running upon the very points of our Bayonets.³³⁶

By standing at 80 or 90 yards from the French defences the British infantry put themselves outside truly effective range, so that when the French tried to counter-attack and came out of Blenheim they had to leave the protection of their defences and move closer to the British in order to form up. This placed them within effective range of the British platoons. The alternative was to just attack in a rush, which was also not a practical option.

³³⁵ National Army Museum, 6807/392A+B *Journal of Robert Stearne*, vol 1, np.

³³⁶ Robert Parker, *Memoirs of the most Remarkable Military Transactions from the Year 1683 to 1718* (Dublin, 1746) p. 89.

Having given up trying to capture the village of Blenheim, Cutts kept the French, who had 27 battalions to Cutts' sixteen, bottled up in the village, relying on steady platoon firing to do so.

All this while the village of Blenheim had been incessantly attacked by the Lord Cutts, who having found it impracticable to enter that place sword in hand, as the enemy were posted, had altered his method & attacked with his Fire only. The first of his lines which was posted near the enemies intrenchments continually discharged in Platoons & the other lines relieved this & each other successively.³³⁷

Sandby's account demonstrated how the lines were rotated while the following account of John Deane suggested this enabled them to keep supplied with ammunition. He also told how some of the attacking troops did get into Blenheim, but were unable to establish any sort of a position in there.

At length the enemy making all the force they could upon us forced us to retreat and to quitt the village having lost a great many of our men, but we rallied againe, having received some fresh ammunition, resolving to give the enemy another salute. So that as soon as they perceived our designe they beat a parley.³³⁸

Bottled up in the village the French were unable to make use of their superior numbers while suffering dreadfully from the British platoon fire, eventually they surrendered.

The effectiveness of infantry against cavalry was also demonstrated in the centre of the battlefield where the Comte de Merode-Westerloo led an attack of French cavalry that was initially successful as it drove Marlborough's cavalry back.

I charged with all the men I could rally, and I had the good luck to defeat my adversaries and push them back to the brink of the stream – but I had no wish to recross it, for I could see they still had five lines of cavalry. However, I failed to notice that they had brought their infantry well forward and they killed and

³³⁷ BL Add Mss 61408, Josiah Sandby, *Journal*, f. 168.

³³⁸ David G. Chandler (ed.), *A Journal of Marlborough's Campaigns During the War of the Spanish Succession, 1704-1711*, by John Marshall Deane (JSAHR, Special Publication no. 12, London, 1984), p. 11.

wounded many of our horses at thirty paces. This was promptly followed by an unauthorised but definite movement to the rear by my men.³³⁹

The actions of the British infantry at Blenheim against both infantry and cavalry demonstrated a continuing commitment to maximising the effectiveness of infantry firepower by getting close to the enemy, even if that meant having to endure the enemy's fire to do so.

The battle of Ramilles in 1706 was won by Marlborough's brilliant use of terrain to move his troops to gain local superiority over the French and is best known for the massive cavalry action that decided the outcome of the battle.³⁴⁰ By comparison with Blenheim the surviving accounts of the battle supplied little information about how the British infantry fought. However, it was during the winter that followed that the next major change took place in the manner in which the infantry delivered their firepower. That winter Lieutenant General Ingoldsby was appointed Commander in Chief in Flanders while the troops were in their winter quarters and Marlborough and most of the general officers were in England.³⁴¹ Ingoldsby was the Governor of Ghent where thirteen British battalions were to spend the winter.³⁴² It is clear from correspondence that Ingoldsby was busy with the training of the infantry in something new. Unfortunately not all the relevant correspondence appears to have survived, such as the letters from Ingoldsby to which Adam Cardonnel, Marlborough's secretary, replied on 16 December 1706.

I received yesterday by the Ostend Packet the honours of your letter of the 10th instant and this morning by way of the Brill that of the 19th and have laid them before my Lord Duke who approves entirely of what you are doing

³³⁹ David Chandler, *Military Memoirs of Marlborough's Campaigns, 1702-1712* (London, 1998), pp.171-72.

³⁴⁰ Chandler, *Marlborough* (London, 1973), pp.172-178; Holmes, *Marlborough*, pp. 332-47.

³⁴¹ BL Add Mss 61371, f. 119, Marlborough's instructions to Ingoldsby, 4th November 1706.

³⁴² John Millner, *A Compendious Journal of all the Marches, Famous Battles and Sieges* (Uckfield, 2004), p.194.

relating to the Exercise of the Foot. You see by the enclosed the method I have taken to acquaint the General of the Foot with it that he may have nothing to object to you on that score.³⁴³

It is clear from the need for Marlborough's approval and Cardonnel's remark about keeping the infantry's commander informed that something of some significance was afoot. The first clue to what was happening appears in a letter from Ingoldsby to Marlborough from Ghent on 31 December 1706.

My Lord I have be-gon to exercise all the adjutants, sargants, and corporals, who are all-reddy pretty perfect, and mightelly pleased that your Grace has thought fitt to put them upon one exercise

Itt is Imposable to tell your Grace the disorder thay weare in, not two regam^{ts} exersising a lik, nor anney one companney off Granadr's eable to exersis with the Battalyone so that if your Ldship had a mind to see the Line exercise, all the Granadr's off the army must have stood still, and not to Regamts eable to perforum a like, which I hope is prevented, and will appeare to your sattysfacksion, iff I can have the recruits over in time.³⁴⁴

At the time of Ingoldsby's letter the last official drill issued to the English and Scots armies had been *The Exercise of the Foot with the Evolutions* that appeared in 1690 and was last issued in 1693 with Mackay's *Rules*. A further edition did appear in Dublin in 1701, but was simply a reprint of the 1690 Exercise and Evolutions without Mackay's *Rules*.³⁴⁵ This drill was written when battalions were armed with matchlock muskets and pikes. With their disappearance and replacement with flintlocks and bayonets it is perhaps not surprising that by the War of Spanish Succession the drill of the infantry varied from regiment to regiment and even within regiments between

³⁴³ BL Add Mss 61398, Adam Cardonnel's letters, June 06 to Sept 07, Whitehall, 16 Dec 1706 to Ingoldsby.

³⁴⁴ BL Add Mss 61163, Ingoldsby Correspondence, Ingoldsby to Marlborough, 31 December 1706, f. 44-46.

³⁴⁵ Anon, *The Exercise of the Foot with the Evolutions* (Dublin, 1701).

the line companies and the grenadiers. It was to correct this state of affairs that Marlborough 'thought fitt to put them upon one exercise'.³⁴⁶

Ingoldsby's letter also demonstrates how new drill was disseminated amongst the regiments. First the regimental adjutants and NCOs were gathered together and taught the new drill. Once proficient they returned to their regiments and taught it to the other officers and soldiers.³⁴⁷ It is clear, however, that Ingoldsby was doing more than just ensuring a uniformity of drill. He was also introducing something completely new as his next letter to Marlborough, written from Ghent on the 2 March 1707, makes clear.

I suppose Maj^r Peniteere will give your Grace an acc^t how forward both officers, and souldiers are in the exercise you were pleas'd to cumande, to perform which as well as the ffirings upon the Queens Berthday, I have contriv'd without toutching one grayne off her majys powder, but what the souldiers brought with them into Garrison.³⁴⁸

This reference to 'ffirings' provides evidence of the first use of firings in the British army.

Prior to this date each platoon in a battalion had fired singly, in turn, along the length of the battalion. A firing was the grouping together of a number of platoons that could either fire one by one within the firing or altogether. The essential point was that these platoons were not grouped physically together, but distributed along the whole front of a battalion. Furthermore there were only three of these firings. This development overcame the main danger of the older system, which was stated

³⁴⁶ BL Add Mss 61163, f. 45.

³⁴⁷ For the training in general of the British Army during the 18th Century see Houlding, *Fit for Service*.

³⁴⁸ BL Add Mss 61163, Ingoldsby Correspondence, Ghent, 2 March, 1707, to Marlborough.

clearly by Humphrey Bland some years later.³⁴⁹ The problem with each platoon firing in turn along the line of a battalion was that whole sections of the line could be left unloaded and therefore vulnerable to a sudden attack, as had been seen at Killiekrankie and Fleurus. If the first platoon to fire in a wing was ready as the sixth platoon fired it meant that the four between them were still reloading and as little as one sixth of a battalion was ready to fire at any time. The adoption of firings meant that the platoons reloading, ready to fire or firing were distributed more evenly along a battalion. Bland was writing in the mid-1720s about the way the Dutch fired and it is clear that they had continued to fire in the same way throughout the War of Spanish Succession. Among the papers of Willem Baron Van Wassenaer, Colonel of the First Dutch Guards Battalion are instructions dating from 1713 on how firing was to be carried out.³⁵⁰ They are, in substance, the same as Douglass' instructions.

It is also possible that there were other reasons for the change. The older system depended on each platoon reloading and being ready to fire again in the time it took the other five in a wing of a battalion to fire. With only three firings reloading had to be carried out in the time that the other two firings took to fire. This suggests that with the increase in the speed of loading resulting from the introduction of the flintlock and the cartridge the reloading time may have been reduced to such an extent that platoons had found themselves loaded and ready to fire, but having to wait their turn while the other five platoons finished firing, not an easy thing to do in the heat of battle. Support for this possibility comes from Mackay's remark that just four platoons could keep up a continuous fire with matchlock muskets and

³⁴⁹ Bland, *Military Discipline*, p. 146.

³⁵⁰ Dutch Nationaal Archief, Familiearchief Van Wassenaer van Duvenvoorde, Inv. Nr. 1223, Stukken van Willem Baron van Wassenaer, colonel-commandant van het eerste bataljon gardes.

bandoleers.³⁵¹ Concentrating the fire of a battalion into three firings also meant that a heavier fire could be delivered in a shorter time, overwhelming the enemy more quickly and avoiding a protracted firefight. Moreover, this form of firing could match, if not outweigh, the intensity of the initial fire of a French battalion and then be maintained while the French intensity fell off.

That Ingoldsby was successful in his enterprise is clear from an account of a review held on 30th May 1707.

The Duke of Marlborough review'd all the British Corps, who exercised and fired four Rounds gradually before him, and that by the signal of the waving of a Pair of Colours for each Word of Command, performed by Colonel William Blakeney, on Top of our Pontons, posted a little in the Front thereof; attended by each Drum-Major with a Drum, in the Front of their respective Regiments, who, at each wave of the Colours, gave a tap on his Drum, answerable to and for each Word of Command; the which each Regiment observed to perform accordingly: And soon afterward he review'd each other Corps of the Army, who also in the like manner exercised and fired gradually before him.³⁵²

Another account of the same review described how 'all the English foote exercised by signall of coulours & beat of drum, and every brigade fired in platoons before his Grace; in which exercise the English gott great applause of the foreigners'.³⁵³

The first real test of this new method of firing the platoons did not come until June 1708 at Wynendael. A large French force attempted to intercept an important allied convoy taking ammunition and supplies to the allies besieging Lille. It was confronted by a much smaller allied force under the command of General Webb. Sir Winston Churchill described the following battle as 'a striking instance of the superior fire-

³⁵¹ Mackay, *Rules of War*, Article VI.

³⁵² Millner, *Compendious Journal*, p. 199.

³⁵³ Chandler, *Deane*, p. 48.

discipline which was so marked a feature of Marlborough's infantry training'.³⁵⁴ One contemporary account describes;

The regiments and grenadiers making such a continual fire as forced their two wings on to their centre and obliged the whole to retire in the greatest confusion, notwithstanding all the efforts their officers could make by encouragement or violence to keep them up, so that they only fired at a distance on our lines which was returned, advancing by platoons as at their exercise with all the order imaginable.³⁵⁵

Another account also draws attention to the precision with which the infantry delivered their fire, 'our foot made such a fire as never troops made more regular at exercise'.³⁵⁶ The new firings clearly allowed the battalions to keep up a continuous, effective and sustained fire.

The following month, July, brought one of Marlborough's great victories, Oudenarde.³⁵⁷ This was something of an encounter battle, with both sides feeding troops into the fight as they arrived. The theme of close and disciplined fire continued in the eyewitness accounts.

Our two battalions of Guards, together with the two brigades of English ffoote ware come up, advanced upon the enemy who boldly bore down towards us, and having rec'd there fire without much damage, we gave them a merry salute, firing into there verry faces, the wch. they could not abide, but turned tayle and never faced more.³⁵⁸

The theme of receiving the enemy's fire and getting close before returning fire and its effectiveness was clearly demonstrated here. The application of the controlled and disciplined nature of platoon fire was also described.

Half our Army, immediately advanced on with undaunted Courage, and vigorously attack'd the Enemies Right Wing next to them, and most open, and

³⁵⁴ Winston S. Churchill, *Marlborough, His Life and Times* (two volumes, London, 1947) vol. ii, p. 448.

³⁵⁵ C. T. Atkinson, 'Wynendael', *JSAHR*, vol. 34 (1956), p. 30.

³⁵⁶ Cathcart Mss, National Library of Scotland, Acc 12686, as cited in Atkinson, C. T., 'Gleanings from the Cathcart Mss', *JSAHR*, vol. 29, (1951), p. 67.

³⁵⁷ Chandler, *Marlborough*, pp. 213-222; Holmes, *Marlborough*, pp. 382-90.

³⁵⁸ Chandler, *Deane*, p. 60.

elsewhere, with small Shot, as regular and gradual as the Time and Ground would permit.³⁵⁹

Another description of the fighting at Oudenarde refers to a Colour Platoon, implying one central platoon, something not found in the platoon firing of Mackay or Douglass where the platoons were evenly divided between two wings.³⁶⁰ The explanation for this and details of the way the new firings were organised were to be found in Ireland.

Following the winter spent training the infantry in Ghent Lieutenant General Richard Ingoldsby had been appointed as Commander in Chief in Ireland. There he found the troops 'very defective in their discipline, especially the foot' and consequently, as Robert Parker records, Ingoldsby wrote to Marlborough requesting that Parker be sent to Ireland 'in order to introduce among them the discipline practiced in Flanders'.³⁶¹ Parker had been the adjutant of the Royal Irish Regiment and consequently responsible for the training of his regiment. It was particularly appropriate for Parker to be summoned as Ingoldsby was the colonel of the Royal Irish. Moreover, some years later the regiment's then Major and acting Lieutenant Colonel, Richard Kane, wrote 'The Regiment of Foot that I serv'd in, is well known by the Title of the Royal Regiment of Ireland, from which Regiment I may without Vanity say, our British Infantry had the Ground-work of their present Discipline.'³⁶² This combination of circumstantial evidence, Ingoldsby's training initiative in Ghent, his choice of Parker and Kane's remark, suggests that it might have been in the Royal Irish that the use of firings was first developed. Moreover, as Parker seems from the

³⁵⁹ Millner, *Compendious Journal*, p. 216.

³⁶⁰ Matthew Bishop, *The Life and Adventures of Matthew Bishop* (London, 1744), p. 169.

³⁶¹ Parker, *Memoirs*, p. 125.

³⁶² Richard Kane, *Campaigns of King William and Queen Anne, from 1689, to 1712. Also A New System of Military Discipline* (London, 2nd ed. 1745), p. 1.

following letter to have been instrumental in devising drill it is possible that he was the officer responsible for the idea.

On 13 September 1708 Parker wrote from Dublin to Lieutenant Colonel Sterne, acting as Colonel of the Royal Irish in Ingoldsby's absence.

Dear Coll^o

I have been labouring hard wth ye two Regim^{ts} in Town in showing them & ye ajud^{ts} our fireings, the Gen^l is come from his progress & will see these Regim^{ts} perform in a day or two after which I shall be going for Corke and when ever the wether permits I must be wth ye Regim^{ts} there & at Kinsale.

According to yo^r directions I brought the Gen^l to consent to our Marching in four Grand divisions and I have undertaken to form ye Square on ye March which is done in half ye time you are drawing up ye Bat^l... [at this point Parker gives a lengthy and detailed description of forming square on the march]. I thought fitt to let you know what I have don in this affair that I might have an opinion of you & ye Major on it.³⁶³

As already shown, the infantry in Flanders were taught the new exercise and firings by training the adjutants and NCOs first. Parker's letter shows that much the same process was followed in Dublin and it is tempting to suggest that it might have been him that carried out the training in Ghent. As Ingoldsby needed to bring Parker to Ireland to introduce the troops there to Flanders' practice it suggests that Flanders' practice was developed in isolation in theatre in Flanders, that it was not written or published, and that it was developed and transmitted by word of mouth. This is not surprising as the British regiments in Flanders were not rotated in and out of theatre as they are today, thus there was no opportunity for the new firings to be transmitted from regiment to regiment through the army. Furthermore, the close proximity of the British regiments in Flanders to each other meant that everything could be achieved by word of mouth and there was no need for written instructions. There was certainly

³⁶³ BL Add Mss 23642, Parker's letter to Lt. Col. Kane, Dublin, 13 Sept 1708.

no published manual of the period that described the new organisation of platoons into firings. It was even possible that Parker did not have his own written version, or, even if he did, that the drill was transmitted by instruction and demonstration rather than by being copied. Houlding has suggested that the drill was copied in manuscript, however, this seems not to have been the case.³⁶⁴ Parker described how 'in order to introduce among them the discipline practiced in Flanders... I continued two years disciplining the Foot of that Kingdom, in which time all the Regiments of Foot passed through my hands'.³⁶⁵ It is clear that he instructed them directly.

Fortunately it is possible to examine in detail what the new drill was and how the new firings were organised as two manuscript versions of the drill survived. One had a first page that was headed 'The Exercise of Firelock and Bayonet with the sev^{ll} Fireings of the Foot as they are to follow Each other according to the method appointed by his Ex^{cie} Lieu^t Gen^{ll} Ingoldsby'.³⁶⁶ The other has no such heading and is superficially different, but in substance it is exactly the same, which further supports the idea that this drill was not copied from a master manuscript, but rather that each officer took his own notes on the new drill.³⁶⁷ The first bears the name of Bryan Mahoney who was an ensign and subsequently a lieutenant in Mountjoy's Regiment until placed on half pay on the Irish establishment when that regiment was disbanded in 1714. The second bears the name of a Captain John Foster of Dulwich who it has not been possible to identify.

³⁶⁴ Houlding, *Fit for Service*, p. 177.

³⁶⁵ Parker, *Memoirs*, p. 125.

³⁶⁶ Cornwall Record Office, DD.R.H.839 (formerly DD.R.H.388).

³⁶⁷ BL Add Mss 29477, The Exercise of the Firelock and Bayonett with ye Doublings and Hollow Square.

Mahony’s manuscript began with the exercise or drill for handling a musket and bayonet, or the manual exercise as it was known, listing each drill movement and how many individual movements each was comprised of. These movements were the same, with minor variations in wording, as those given in Foster’s manuscript and in a publication with the title *The New Exercise of Firelocks & Bayonets; Appointed by his Grace the Duke of Marlborough to be used by all the British Forces*. This was not an official publication, but was stated to be ‘By an Officer in Her Majesties Foot Guards’ and was published in London in 1708.³⁶⁸ It was also limited to the manual exercise and did not deal with the firings.

The key sections in both Mahony’s and Foster’s manuscripts were their descriptions of the organisation of a battalion into platoons and firings and how firing was to be carried out. Mahony provided a diagram that clearly shows a central or Colour Platoon, see figure 5.1.

Fig.5.1: A Battalion of infantry according to Mahoney’s Manuscript³⁶⁹

3(G)	1	2	1	2	1	2	3	2	1	2	1	2	1	3(G)
1	1	1	3	3	5	5	3	6	6	4	4	2	2	2

Front

Each box represents one of the fifteen platoons that a battalion was now to be divided into. The grenadier company was still divided into two platoons that took their

³⁶⁸ Anon., *The New Exercise of Firelocks & Bayonets; Appointed by his Grace the Duke of Marlborough to be used by all the British Forces* (London, 1708).

³⁶⁹ Cornwall Record Office, DD.R.H.839.

places on the flanks of the battalion, indicated in the diagram above by (G). The hat companies were divided into thirteen platoons. The fifteen platoons were then divided into three firings, the first and second of six platoons each and the third of just three. The upper number in each box indicates the firing that a platoon was in. The lower number in each box indicated the order of firing of the platoons within each firing. Thus when the first firing fired (highlighted in red) the platoon marked 1 over 1 fired first, followed by the platoon marked 1 over 2 from the other flank of the battalion. Next came 1 over 3, then 1 over 4, 1 over 5 and finally 1 over 6. The second (yellow) and third (green) firings followed in the same manner. There was a slight difference in the way the grenadier platoons fired as they were to wheel 45° towards the centre so that their fire was directed more towards the centre of the enemy line. If firing on the march or advancing the whole battalion was to halt when the platoons fired. If the battalion was retreating then the whole battalion halted and faced about while the platoons of a firing delivered their fire. The effect of this new method was that the firing of the platoons was more evenly distributed across the front of a battalion, as the first two firings consisted of almost every other platoon. In addition there were always at least three platoons loaded at any time, the smallest, third firing, and because those were on the flanks and in the centre it maximised the protection they could give to the other platoons.

The most significant aspect of the new firings, however, was that rather than only firing in turn all the platoons in a firing could fire together in a single volley. Six platoons together represented in excess of 40% of the firepower of a battalion. This could be followed very quickly by a second firing of the same size and even the smaller third firing, 20%, was on a par with a rank of a French infantry battalion.

Furthermore, due to the sustainability of platoon firing, this small third firing could be followed by the first firing again with another 40% of the available firepower and so on. This sustainability was in part a product of the changes that had taken place over the preceding fifteen years or so as flintlock replaced match lock and cartridge replaced bandoleer leading to much quicker reloading.

As a variation on the above the commander of a battalion could choose to keep in the reserve the front ranks of the first and second firings. The reserved front ranks were then fired after the second firing. This would give four firings of approximately 27%, 27%, 26% and 20%. The orders for loading and firing continued to be 'make ready', 'present' and 'fire' but the distance between ranks for loading was reduced to a single pace from two. This reduction in space was probably the result of the abandonment of the matchlock and bandoleer making the loading process less risky. The benefit of it was that it further reduced, albeit slightly, the time taken to load as the third rank now only needed to take two paces back instead of four.

A reduction in the reloading time of the few seconds it took to take two steps backwards may not seem very significant. However, when combined with the benefits of the changes in weapons and equipment it is what allowed a battalion to keep up a continuous fire based on three firings rather than the four platoons required by Mackay. This increase in the rate of fire increased a battalion's firepower by a third.

The effectiveness of the new firings was demonstrated at Oudenarde, while at the battle of Malplaquet in 1709, the fourth of Marlborough's great victories against the

French, the British infantry demonstrated that they had not lost any ability when hand to hand combat rather than shattering volleys was required.³⁷⁰ The fighting in the wood of Taisnières was described by Sergeant John Wilson.

[We] attacked the Enemy in the wood afores'd with a great deal of courage and resolution but were received by the Enemy with as great bravery. Wee beat them from that post and they beat us back again with as great courage and resolution as wee had them. Whereupon ensued an obstinate engagem't for the space of two hors in which there was a great effusion of blood on both sides; the Armys fireing at each other bayonet to bayonet. And after came to stab each other with their bayonets and several came so close that they knocked one another's brains out w'th the butt end of their firelocks.³⁷¹

It was, however, at Malplaquet that a most remarkable event occurred that gives perhaps the clearest evidence of the superiority of British platoon firing over French fire by ranks. Robert Parker of the Royal Irish Regiment was not a participant in the battle of Malplaquet, being at the time in Ireland, but he has left a most vivid account, presumably garnered from fellow officers. The Regiment was the last British regiment to arrive on the battlefield and found itself in a relatively isolated position of the extreme flank of the army, opposite the wood of Sart. As the army advanced and the Royal Irish marched through the wood they found themselves in a clearing and confronted by a single French battalion. No other troops were involved in what followed.

Upon this Colonel Kane, who was then at the head of the Regiment, having drawn us up, and formed our Platoons, advanced gently toward them, with the six Platoons of our first fire made ready. When we had advanced within a hundred paces of them, they gave us a fire of one of their ranks: Whereupon we halted, and returned them the fire of our six Platoons at once; and immediately made ready the six Platoons of our second fire, and advanced upon them again. They then gave us the fire of another rank, and we returned them a second fire, which made them shrink; however they gave us the fire of

³⁷⁰ Chandler, *Marlbrough*, pp. 254-267; Holmes, *Marlbrough*, pp. 423-32.

³⁷¹ Wilson, John, 'The Journal of John Wilson' in David G. Chandler (ed.) *Military Miscellany II, Manuscripts from Marlborough's Wars, the American War of Independence and the Boer War* (Stroud, 2005) p. 78.

a third rank after a scattering manner, and then retired into the wood in great disorder: On which we sent our third fire after them, and saw them no more.³⁷²

This was a text book action on the part of the Royal Irish. They closed with the French and did not fire until the French had. The French were clearly adhering to their usual practice of firing by ranks and the Royal Irish replied with whole firings. When Parker's regiment advanced they discovered that the enemy battalion had been the French Royal Regiment of Ireland. The British battalion had suffered four killed and six wounded while the French battalion lost 'near forty' killed and wounded. Parker gave an explanation for this victory and the disparity in casualties.

The advantage on our side will be easily accounted for, first from the weight of our ball; for the French Arms carry bullets of 24 to the pound: Whereas our British Firelocks carry ball of 16 only to the pound, which will make a considerable difference in the execution. Again, the manner of our firing was different from theirs; the French at that time fired all by ranks, which can never do equal execution with our Platoon-firing, especially when six Platoons are fired together. This is undoubtedly the best method that has yet been discovered for fighting a Battalion; especially when two Battalions only engage each other.³⁷³

This extensive and detailed account contained a wealth of information, but has also been subject to some misunderstanding. Parker stated that the first and second firings of the Royal Irish consisted of six platoons. It has been assumed by Chandler, Nosworthy and others that the third firing also consisted of six platoons and that this event represented a clear example of platoon firing as described by Kane.³⁷⁴ It is clear from the manuscripts of Mahony and Foster that the third firing would have been only three platoons. Three firings of six platoons each was a much later development, before which, as will be shown, there was a reduction to only fourteen

³⁷² Parker, *Memoirs*, pp. 138-9.

³⁷³ Parker, *Memoirs*, pp. 138-9.

³⁷⁴ Chandler, *Art of Warfare*, pp. 117-20; Nosworthy, *Anatomy of Victory*, pp. 56-57; Kane, *Campaigns of King William*, p. 112.

platoons. Finally, in an echo of Mackay, the third firing was fired as the enemy broke and ran.³⁷⁵

Parker describes the battalion advancing on the enemy and not firing until fired upon, each rank fired by the French Irish being replied to with all the platoons of a firing giving fire together. He is clear in his view of the superiority of platoon firing over firing by ranks, which is perhaps not surprising as each French rank that fired, representing 20% of the battalion, was replied to by a firing of 40% of the Royal Irish. He also makes a very interesting comment about the relative effectiveness of British and French muskets. Edward D'Auvergne made a similar comment in his account of the campaign of 1692. 'Of the wounded a vast many dy'd afterwards, because our arms are stronger, and carry better balls than theirs.'³⁷⁶ Undoubtedly a heavier musket ball travelling at the same velocity as a lighter one will inflict the greater damage. However, there are a number of other factors at play that determine the ballistic characteristics of a musket shot, such as the size of the charge of powder, the strength of the powder and the quality of the musket barrels, which would need to be considered in evaluating Parker's claim and which fall outside this work. But whatever the reason, there would appear to have been a belief that individual British musket shots caused more damage than French ones. If this belief was shared by the French it could have had a serious, deleterious effect on their morale. A hint that this might have been the case is found in Chandler who cites a French despatch after the battle of Steenkirk that reported French soldiers throwing away their

³⁷⁵ Mackay, *Rules of War*, Article XVIII.

³⁷⁶ D'Auvergne, *A Relation*, 1692, p. 48.

matchlocks and taking up captured flintlocks.³⁷⁷ That, however, could be because of the superiority of the flintlock to the matchlock firing mechanism rather than a superior ballistic performance.

The new system of firings was not without its problems. These arose when a battalion had to form a hollow square as a defence against cavalry. This required the grenadiers to be divided into four platoons and the rest of the battalion to be divided into four grand divisions of equal size that were divided in turn into four platoons each. This was relatively straightforward for the grenadiers, but the hat companies had to be reorganised from thirteen platoons into sixteen. This problem was touched upon in Parker's letter of 13 September 1708; however it is not clear if he is writing about four grand divisions being made the norm or just used on the march.³⁷⁸ Each grand division formed a side of the square and became a firing of four platoons. The grenadier platoons either stayed outside the square and covered the corners or marched in and out of the square to fire, the right hand platoon of each face, called the angle platoon, acting as a sort of gate for them. A square could be formed either from the battalion in line or on the march with the four grand divisions marching in column, one behind the other. This last manoeuvre as described in Mahony's manuscript is the same as that apparently devised by Parker. Once the square was formed the battalion commander had a number of options when it came to firing. First the angle platoons marched forwards while the grenadiers outside the square fired. They then marched into the square behind the angle platoon while it fired before returning to its place. After that the other three platoons in each firing fired,

³⁷⁷ Chandler, *Art of Warfare*, p. 78.

³⁷⁸ BL Add Mss 23642, Parker's letter to Lt. Col. Kane, Dublin, 13 Sept 1708.

the right hand one first, then the left and lastly the centre one. As a variation on this the fire of the front ranks could be reserved. Alternatively, the three platoons of each firing could fire together by ranks, starting with the rear rank, followed in turn by the angle and grenadier platoons firing their three ranks together.

Given the complexity of two different arrangements of a battalion into platoons it is perhaps no surprise that British infantry battalions appear to have preferred to face French cavalry head on. At Malplaquet Matthew Bishop described what happened when his battalion was threatened by French cavalry.

Then we had orders to wheel to the right. Had we not the French Horse would certainly have fallen upon our Rear. This happened at the Ground where we first made our Attack. But when we faced them, they backed their Horses as fast as they could.³⁷⁹

Foster's manuscript book also contained a revision of drill issued by Lord Orkney on 23 October 1711 because 'For the better Regulating of her Maj^{ties} Foot his Grace the Duke of Marlborough has thought fit I should give out the following orders.' Orkney's orders included the manual exercise, which contained minor changes, mostly in the wording of commands, the Evolutions, described as being 'according to the Explainatⁿ in K W^{ms} Book of Exercise', various regulations for garrison duty and the like and a new method of organising the firings.³⁸⁰ A diagram showed twelve hat platoons and two of grenadiers, see figure 5.2.

³⁷⁹ Bishop, *Life*, p. 213.

³⁸⁰ BL Add Mss 29477, f. 117v – 107r, the folios with the drill on are written from the back of the book.

Fig 5.2: A battalion of infantry after 1711, according to Foster³⁸¹

11(G)	1	7	3	9	5	13	14	6	10	4	8	2	12(G)
3	1	2	1	2	1	3	3	1	2	1	2	1	3

Front

The first firing (red) was composed of the platoons numbered 1 to 6, using the upper number, the lower number indicating the first firing. The second firing (yellow) was platoons 7 to 10 and the third firing (green) was the grenadier platoons, 11 and 12, and platoons 13 and 14 in the centre. The orders stated ‘You fire your Platoons Right and Left as usual’ referring to the order of firing within each firing.³⁸² The orders do not go into any detail about the different ways of managing the fire of the firings and the platoons, so it would seem that these remained unchanged.

This method represents an improvement on the previous method for a number of reasons. First, this organisation meant a return to each company also forming a platoon, except for the grenadiers, which can only have simplified matters and made command and control easier. Secondly and most obviously, it is a lot easier to form a square as the twelve line platoons are simply divided into four grand divisions without the need to reorganise the platoons. Once the square was formed the grenadiers still marched in and out to fire, the three platoons on each face of the square formed a firing and fired in the order of the right hand platoon first, then the left hand one and finally the centre one. The third improvement was that fewer platoons meant bigger platoons. The first firing of six platoons represented almost half the battalion while the other two firings were roughly a quarter each. This meant

³⁸¹ BL Add Mss 29477, f. 117v – 107r.

³⁸² BL Add Mss 29477, f. 107v.

that the all important first firing was slightly bigger than before while the second firing was about a third smaller. The third firing was also larger than before, but two of its four platoons were the grenadier company divided in two, so it was still smaller than the second firing. In percentage terms the strengths of the firings were approximately 46%, 31% and 23%.

The orders for the garrison of Ghent issued by Major General Cobham in 1712 contain no changes to the organisation and execution of firing, he did, however, include in the orders some illuminating observations about firefights.

All Commanding Officers must take great care when they march a Battⁿ to attack an Enemy, to be moving so slow that their men may be in good ord^r & not out of breath when they come to Engage, they must always manage their fire well, & never begin to fire till they are very near it being very certain it is better to receive an Enemy's fire than fire at two (sic) great distance.³⁸³

Cobham emphasised the importance of a steady advance and of getting close to the enemy before firing, even if it meant receiving the enemy's fire. On the subject of dealing with cavalry attacks he advised that whether in square or line it was best to reserve the fire of the front rank while the second and rear ranks fired by platoon. The fire of the front rank was to be delivered at close range, 'a well managed fire at 30 or 40 paces distance will make their front rank not only stop short, but fall into confusion upon those which follows'.³⁸⁴

Cobham also gave details of a rather fanciful way of forming a battalion six deep into a total of twenty-eight platoons. His comment on this was telling. 'These sorts of figures are very handsome in exercise & very useful for ye instruction of soldiers, & it

³⁸³ BL Stowe Mss, 481, f. 131r.

³⁸⁴ BL Stowe Mss, 481, f. 131v.

may happen may be of great use sometimes.’ He followed this with his observations on what he considered practical on the battlefield.

I have seen much pains & trouble in firing Platoons advancing, & retreating but such will never happen, but at Exercise for it was never Done on real service but a Battⁿ formed this way is ready to march either backwards or forwards together, if you beat ye enemy you can’t overtake them in good order without ye fear of being flank’t, & if they will beat you all the Precaution imagineable will not hinder some Confusion so as to put you by order so that fireing as it’s call’d maintaining ground, & very quick is ye real service done by Platoons, & let ye maner & form of making Plattoons be never so convenient & handsome, quick firing & maintaining ground is ye real service of it, & indeed on all occasions to teach men to fire quick & sure is the best Exercise, not but all figures composed Handsomely shows a genius fill for great matters, it is very commendable in every offic^r & will meet with the applause of all men, & will enable those men to make enquiry into further matters that will at least make them great.³⁸⁵

Taken together with his comment about not firing at ‘two great distance’ this represented a clear statement of British doctrine for infantry combat as it had developed during the previous two decades. It amounted to getting in close, thirty paces or less, before one fired, fire quickly and accurately, hold one’s ground and keep firing. Stated thus it was a simple doctrine, albeit one that was complex in execution. That it worked is clear from the success of British infantry on the battlefield. Sustained fire won the day at Wynendael in the face of a numerically superior enemy and kept another numerically superior French force bottled up in Blenheim. The short, sharp bursts of fire delivered at Oudenarde quickly decided the firefights in favour of the British infantry. Confidence in its firepower also allowed British infantry to face and see off French cavalry without resorting to forming square, as at Blenheim and Malplaquet.

³⁸⁵ BL Stowe Mss, 481 f. 134v-135r.

There is no doubt that Marlborough was one of the finest generals of his day and one of the best ever produced by Britain. All his skill and talent in planning and manoeuvre would, however, have counted for nothing if his infantry had not been able to win the firefights and drive off enemy cavalry. That they could do so, frequently in the face of a numerically superior enemy, was due to the adoption of and adherence to platoon firing. Employed at often brutally close range it simply overwhelmed the opposition with its weight of fire. Combined with continuing ferocity in hand to hand combat British infantry under Marlborough became arguably the finest in Europe.

6: Humphrey Bland and The Duke of Cumberland, 1714 to 1749

Following the battle of Malplaquet in 1709 and the end of the War of Spanish Succession in 1714 the British Army was not involved in another major battle until Dettingen in 1743. During the intervening three decades there were minor engagements and campaigns, most notably against the Jacobites in 1715 and 1719. Mostly, however, the army was engaged in peacetime soldiering and its levels of readiness and competency, its fitness for service, suffered accordingly.³⁸⁶ It was also a period during which little of any substance appeared to change in the way that the British infantry would fight, battalions would still form their companies into platoons organised in three firings. What changes there were, however, whilst subtle, would have both positive and negative effects on the effectiveness of the infantry in battle.

It was also a time when professional British soldiers started to put pen to paper for the first time since Orrery and Turner were published in the 1670s.³⁸⁷ It was also when, in 1728, the first official drill regulations since the 1690s were published.³⁸⁸ Taken together with the regulations, the works of Bland and Kane gave a picture of how British infantry, indeed the whole army, intended to fight battles.³⁸⁹

³⁸⁶ For an extensive discussion of the negative effects of peacetime soldiering on the army's readiness for war see John Houlding, *Fit for Service, The Training of the British Army 1715-1795* (Oxford, 1981).

³⁸⁷ Roger, Earl of Orrery, *A Treatise of the Art of War* (London, 1677); Sir James Turner, *Pallas Armata* (London, 1683).

³⁸⁸ Anon, *Exercise for the Horse, Dragoons and Foot Forces* (London, 1728), after *1728 Regulations*.

³⁸⁹ Humphrey Bland, *A Treatise of Military Discipline* (London, 1727); Brigadier-General Richard Kane, *Campaigns of King William and the Duke of Marlborough, Also A New System of Military Discipline, for a Battalion of Foot on Action* (London, 1745).

Accounts of battles became more numerous, allowing analysis of the way the British infantry conducted themselves during of The War of Austrian Succession, 1740 to 1748, and that home affair of the Jacobite Rebellion of 1745 to 1746. The manuscript of La Fausille, written after the war, was the first example of a retrospective analysis of combat by a British officer and offered the opportunity for deeper understanding of what happened at Dettingen and Laffeldt and the doctrinal approach of the infantry.³⁹⁰

This chapter will first analyse the developments and writings prior to the start of the War of Austrian Succession in order to establish how British infantry intended to fight. An analysis of events during the war will then establish the extent to which practice followed theory and the alterations that were made during the war.

When writing about the tactics and doctrine of the British Army in the mid-eighteenth century modern historians invariably turn to Humphrey Bland's *A Treatise of Military Discipline*. Houlding describes it as being of 'commanding influence in the army'.³⁹¹ In the preface to his *Treatise of Military Discipline* Humphrey Bland laid out his aims and his reasons for writing. He pointed out that there had been nothing written on the art of war by a British author for fifty years. He went on to say that as there were then so few old officers with experience of war he felt it necessary to write what he knew of military matters for those 'who are yet to learn'.³⁹² Bland's *Military Discipline* was thus a statement of how things were at the time of writing. It contained nothing that would be considered innovative by his fellow officers, if anything it looked

³⁹⁰ Royal Collection, Cumberland Papers, Orderly Book Extracts, 2/2 f.4r (M), Lt. Col. John La Fausille's Ms.

³⁹¹ Houlding, *Fit for Service*, p.179.

³⁹² Bland, *Military Discipline* (2nd ed., London 1727), Preface, np.

backwards. It was also very comprehensive, which probably explains its widespread appeal at the time and its endurance.³⁹³ For the historian it allows developments since the War of Spanish Succession to be identified.

Prior to the publication of Bland the drill for handling, loading and firing the musket was simply referred to as the Exercise of the Firelock and Bayonet. In Bland this was, for the first time, referred to as the Manual Exercise, in order to differentiate it from the Platoon Exercise that then appeared. Prior to the introduction of the Platoon Exercise, possibly some time around 1720, that part of the Exercise of the Firelock and Bayonet that was concerned with loading could be carried out either move by move, with a separate command for each move, or by each soldier in his own time when the orders for loading and firing were reduced to 'make ready, present, fire'. The Platoon Exercise was intended specifically for the soldier loading in his own time. Most of the movements for these two exercises were the same, but there was one significant difference. In both exercises the soldier, having faced to the right of his unit, primed the pan of his musket with the musket pointed to the front of his unit and held level in the left hand at about waist height. With the Manual Exercise the soldier then faced to the front and brought the musket upright in a position known as 'Recover'. He then faced to the left and brought the musket down, holding it in his left hand with the butt down and the muzzle up near his right shoulder ready to insert the cartridge in the barrel. This was the movement known as 'Cast About to Charge'. After loading his musket the soldier would face to the front and come to the 'Recover' position again. In the Platoon Exercise, after priming, the soldier stayed facing to the right and simply rotated his musket in his left hand to bring the muzzle up to near his

³⁹³ It went unrevised until the eighth edition of 1759 and the last, ninth edition was published in 1762.

right shoulder where he could load the musket. It was effectively the same position as that for loading after casting about, but without the 180° turn to the left with the 'Recover' in the middle of it. This simple expedient cut the loading time by several seconds and also required less effort on the part of the soldier.³⁹⁴ Curiously the official regulations issued in 1728, the year after the publication of Bland, made no mention of the Platoon Exercise. However, in the next official regulations, of 1756, the Platoon Exercise was the only way given of loading a musket.

In his instructions for the Platoon Exercise Bland also reintroduced locking, last seen in Mackay's *Rules*.³⁹⁵ Bland observed that this avoided the awkward position of the middle rank man having to stoop.

Bland goes to considerable detail on the organisation of platoons into firings. It is here that some difficulties begin to arise in identifying precisely how it was intended to organise a battalion for platoon firing in the 1720s. Lord Orkney's orders of 1711 had laid down an organisation of fourteen platoons.³⁹⁶ At that time a battalion had one grenadier company and twelve hat companies, meaning that each hat platoon was made up of a single company while the Grenadier company formed two platoons. Bland's *Military Discipline* included a diagram of a battalion drawn up that clearly showed that structure.³⁹⁷ In 1717, however, the establishment of battalions in England had been reduced by one company. Despite this an order book for Handasyde's Regiment showed a battalion in 1723 still divided into two grenadier

³⁹⁴ Bland, *Military Discipline*, p. 73

³⁹⁵ Bland, *Military Discipline*, p. 72; Mackay, *Rules*, Article IX; above, pp.85-86.

³⁹⁶ BL Add Mss 29477, f. 117v – 107v, see above, p. 138.

³⁹⁷ Bland, *Military Discipline*, opposite p. 2

platoons and twelve hat platoons, see Figure 6.1.³⁹⁸ This organisation was also shown in the *1728 Regulations* and meant that eleven hat companies had to form twelve platoons.³⁹⁹ In Ireland the establishment was reduced to just nine hat companies in a battalion and the order book for Handasyde's, then serving in Ireland, also showed an eleven platoon organisation, presumably in an endeavour to adhere to the more practical method of platoons and companies being the same, Figure 6.2.

Figure 6.1: A Battalion in 12 Platoons Besides Grenadiers Divided into four Grand divisions three Platoons in each Grand Division⁴⁰⁰

1	3	1			2			3			4			2	4
3	1	2	1	2	1	3	3	1	2	1	2	1	3		

Front

The lower number indicates the firing, the upper number indicates the four Grand Divisions and, for the grenadiers, how they divide to form square.

Figure 6.2: The Method of Firing a Battalion in 11 Platoons Including Grenadiers in three Fireings⁴⁰¹

9(G)	1	5	3	7	11	8	4	6	2	10(G)
3	1	2	1	2	3	2	1	2	1	3

Front

The lower number indicates the firing, the upper number the order of the platoons when firing individually.

³⁹⁸ National Army Museum, NAM6807.205, *The Exercise of the Firelock and Bayonett that was ordered to be used by all the Regim^{ts} in Ireland 1723*.

³⁹⁹ *1728 Regulations*, p. 80

⁴⁰⁰ National Army Museum, NAM6807.205.

⁴⁰¹ National Army Museum, NAM6807.205.

Early in his book Bland stated that the hat companies of a battalion should be divided into three grand divisions, each divided into three, four or five platoons. With the grenadiers, as usual, divided into two platoons, this left the eleven hat platoons to be divided into nine, twelve or fifteen platoons.⁴⁰² Subsequently, however, Bland provided diagrams for battalions formed with two grenadier platoons and ten, thirteen or sixteen hat platoons.⁴⁰³ He then went on to write of his diagrams that they made everything clear and 'I believe there will want no further Explication for the Comprehending of it'.⁴⁰⁴ Several pages later he adds that these plans are for battalions of four hundred, five hundred and six hundred men respectively, resulting in platoons of between thirty-three and forty-six men.⁴⁰⁵ All of the organisations that Bland gives, bar one, are at odds with the contemporary organisations in the order book of Handasyde's and the *1728 Regulations*, both of which have twelve hat platoons.

This organisational variety is thoroughly confusing and difficult to make any sense of. However Bland did write 'The rule laid down in these Plans, for disposing the Platoons of the different Firings in the manner here mention'd, may be varied, if the Commanding Officer thinks proper.'⁴⁰⁶ What Bland was giving the reader were examples, and within his writing were the principles that guided how battalions were to be divided into platoons, according to circumstance. With regard to the size of platoons he wrote that they should not be fewer than thirty men, because less than

⁴⁰² Bland, *Military Discipline*, p. 60.

⁴⁰³ Bland, *Military Discipline*, p. 69.

⁴⁰⁴ Bland, *Military Discipline*, p. 68.

⁴⁰⁵ Bland, *Military Discipline*, p. 81.

⁴⁰⁶ Bland, *Military Discipline*, p. 68.

that did not produce sufficient fire, or more than forty-eight because that was the most a single officer could manage.⁴⁰⁷ This is entirely in keeping with his statement about the numbers of platoons varying according to the size of battalions. In this remark on command considerations he was harking back the first half of the seventeenth century.⁴⁰⁸ The 1728 Regulations also suggested that other arrangements were possible when they stated 'supposing the Battalion to be told off in fourteen Platoons, including two of Granadiers'.⁴⁰⁹

If Bland was confusing in his description of the various permutations of the organisation of platoon firing, he was clearer when he discussed practical tactics and doctrine. Here he came down firmly in favour of the use of four Grand Divisions and the dividing of a battalion's hat companies into twelve or sixteen platoons. As he wrote, if a battalion was divided into any other number of platoons it was necessary to reorganise the platoons before Grand Divisions and Squares could be formed.⁴¹⁰

Bland helpfully laid out the reasons why platoon firing was the best way to fire, with the platoons of each firing distributed along the front of a battalion, giving four reasons. First it spread the fire of each firing across the enemy battalion. Secondly, if a battalion was attacked while some platoons were loading then the fire of no part of the battalion would be particularly weakened. His third reason is something of a reiteration of the second, which was that if the platoons of a firing were altogether it would leave that section vulnerable while loading. Lastly he suggested that this way

⁴⁰⁷ Bland, *Military Discipline*, p. 66.

⁴⁰⁸ See above, p. 77.

⁴⁰⁹ *1728 Regulations*, p. 76.

⁴¹⁰ Bland, *Military Discipline*, p. 127.

of firing 'makes the Exercise the more beautiful' and, rather more importantly, got the men used to having firing going on both sides of them without joining in themselves.⁴¹¹

In his descriptions of how to carry out platoon firing Bland wrote of the platoons both firing in turn within their particular firing and all the platoons of a firing firing together. As detailed in Mahoney's drill book he also had the grenadier platoons wheeling slightly inwards before firing.⁴¹² After firing the men were to reload without orders and when finished to bring their muskets to the shoulder, that is, held vertically against the left shoulder, the butt at about waist height. When advancing Bland had the whole battalion halt while each firing fired, likewise when retreating he had the whole battalion halt and face about while each firing fired. He also described an alternative way of firing advancing and retreating, which involved the battalion continuing to move while each firing fired and the men marching with their muskets at the recover position and at half cock. In this position the musket is held vertically in front of the body with the right hand at the trigger guard at about chest height. This was the position immediately before bringing the butt to the shoulder and levelling the musket to fire. Bland disliked this as it made it particularly difficult to stop the men firing out of turn. He wrote;

In Advancing towards the Enemy, it is with great Difficulty that the Officers can prevent the Men (but more particularly when they are Fired at) from taking their Arms without Orders, off from their Shoulders, and Firing at too great a Distance. How much more difficult must it be to prevent their Firing, when they have their Arms in their Hands ready Cock'd and their Fingers on the Trickers.⁴¹³

⁴¹¹ Bland, *Military Discipline*, pp. 67-68.

⁴¹² See above, p. 132.

⁴¹³ Bland, *Military Discipline*, p. 80.

When it came to dealing with cavalry Bland advised the same way of firing, whether a battalion was in line or square, which was keeping the front rank in reserve and firing the second and rear ranks by platoons.⁴¹⁴ He went on to say, however, that because of the intervals in cavalry formations there was usually sufficient time for all a battalion to reload between individual cavalry attacks, in which case it was unnecessary to keep a reserve.⁴¹⁵ As with earlier writers he stressed the importance of not firing until close range, twenty five or thirty paces, and also of being able to present, but not actually fire⁴¹⁶. He also described how firing by ranks was executed, and dismissed it as old fashioned and a relic of the days when pikes were used, but made no mention of this still being the preferred method of the French Army.⁴¹⁷ Bland was confident of the infantry's ability to deal with cavalry and stated; 'If Foot could be brought to know their own Strength, the Danger which they apprehend from Horse would soon vanish; since the Fire of one Platoon, given in due Time, is sufficient to break any Squadron.' He continued in words that anticipated the Battle of Minden, 'one battalion of well-disciplined Foot may despise the Attacks of a whole Line of Horse'.⁴¹⁸

When he wrote of how to engage enemy infantry Bland continued the long held doctrine of reserving a battalion's fire until close range and after the enemy had fired. Unlike earlier writers, however, he spelt out this doctrine, rather than leaving it to be extrapolated from the evidence. He advised that the sight of seeing troops with their

⁴¹⁴ Bland, *Military Discipline*, pp. 79.

⁴¹⁵ Bland, *Military Discipline*, p. 92.

⁴¹⁶ Bland, *Military Discipline*, p. 94.

⁴¹⁷ Bland, *Military Discipline*, pp. 81-82.

⁴¹⁸ Bland, *Military Discipline*, p. 91.

fire reserved still advancing on troops that had fired would often cause those who had fired to run away.⁴¹⁹ If the enemy also reserved their fire Bland advocated preventing them from firing by giving a battalion's fire and immediately charging them, under the cover of the smoke, with the bayonet. His belief was that the shock of the fire and the immediate attack would result in victory with 'a very inconsiderable Loss'.⁴²⁰ Bland also included in his work a description of how Dutch infantry conducted platoon firing. The Dutch fired their platoons from the flanks to the centre, alternating between the right and left flanks, thus giving it its name of alternate fire. Bland describes how the Dutch used alternate fire while advancing to wards the enemy, but reloaded so that when close to the enemy they could give them the fire of the whole battalion, 'as the English do'.⁴²¹ What was absent from Bland's work was any mention of sustained fire fights. Within Bland's work there was an expectation that a single round of close range fire from a battalion followed by an immediate attack with the bayonet would be sufficient to bring victory.

Brigadier General Richard Kane's book was not published until after his death. The writer of the Preface says of Kane:

With great Contempt he read some Books, which pretended to Teach the whole Military Art; and often assured his Friends, that those mean Performances provoked him, to attempt something on the same Subject, which, if not perfect, might be free from those gross Errors and glaring Absurdities, which abound in them.⁴²²

This may be a reference to Bland's *Military Discipline*, indeed it is difficult to think that it could refer to anything else for the simple reason, as Bland himself said, there

⁴¹⁹ Bland, *Military Discipline*, p. 134

⁴²⁰ Bland, *Military Discipline*, p. 133

⁴²¹ Bland, *Military Discipline*, p. 146

⁴²² Kane, *Campaigns*, p. iv

were no other books. Kane himself is also scathing of the 1728 regulations. After quoting its title in full he called it a 'poor performance'.⁴²³

Kane is particularly adamant concerning the division of a battalion into four Grand Divisions. This is, he wrote, 'the Groundwork of all our Performances, of which our *Martinet* gives but a faint Idea'.⁴²⁴ Although Bland wrote initially of dividing a battalion into three Grand Divisions he also wrote of four when it came to how to form a square. The 1728 regulations contain no mention at all of forming Grand Divisions, which makes it seem likely that Kane's 'Martinet' is a reference to the official regulations. These were drawn up by a committee of very senior and distinguished officers and approved by the King, George II, who took a great interest in his army. It is therefore perhaps not surprising that Kane's ideas were not published until after his death.

Kane was also flexible in the number of platoons to be formed by a battalion. His preferred number was sixteen hat platoons in addition to the grenadiers, but he also wrote that twelve was possible for a weak battalion, particularly one on a reduced peace time establishment. He divided the platoons into three firings but as he considered it 'absolutely necessary' to have a reserve he held the front rank as a reserve or fourth firing, leaving the second and rear ranks to carry out the firings.⁴²⁵ The front rank of the two central platoons, however, were not reserved, but were to

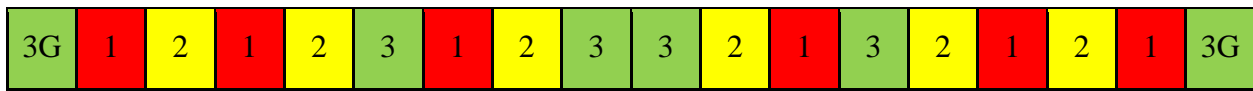
⁴²³ Kane, *Campaigns*, p. 109.

⁴²⁴ Kane, *Campaigns*, p. 111.

⁴²⁵ Kane, *Campaigns*, p. 112.

fire with the rest of their platoons. This was so that the battalion commander, out in front of the battalion, had somewhere safe to stand when the reserve fired.⁴²⁶

Figure 6.3: A Battalion in 18 platoons according to Kane⁴²⁷



Front

G = Grenadiers
 1 = 1st firing
 2 = 2nd firing
 3 = 3rd firing

Kane insisted that all the platoons of a firing should fire together and not one at a time according to their order in a firing, which he describes as normal practice at reviews, 'they are not to keep popping by single Platoons'.⁴²⁸ He required the full weight of six platoons' fire to be delivered together.⁴²⁹ Kane described how the simultaneous firing of six platoons scattered along a battalion frontage could be achieved by the battalion commander making use of drum beats to transmit commands. The platoon officers and sergeants were simply to ensure their men acted as ordered by the battalion commander. In particular he mentioned ensuring that the soldiers 'level well their Arms, so that their Fire may have Effect on the Enemy'.⁴³⁰ Kane does seem to suggest that extended fire fights might be necessary, describing the battalion going through its firings he wrote 'And thus the Colonel continues his Firings standing, without Intermission between them'. If the enemy were not broken by that fire he wrote that the battalion should be advanced closer by

⁴²⁶ Kane, *Campaigns*, p. 113.

⁴²⁷ Kane, *Campaigns*, p. 111-113.

⁴²⁸ Kane, *Campaigns*, p. 110.

⁴²⁹ Kane, *Campaigns*, p. 117.

⁴³⁰ Kane, *Campaigns*, p. 118.

the commander who then 'continues his Firings as fast as he can, until he obliges them to give Way'.⁴³¹

Like Bland, Kane writes that infantry in line fighting cavalry should fire by platoons, but In contrast to Bland, Kane wrote that when in square each side of the square was to fire by ranks.⁴³² Unfortunately he did not explain his reasons for his preference. Kane also completely omits any mention of the bayonet in attack or defence. Another officer writing in 1744 deliberately omits anything on firings, writing that they 'have long ago been very clearly and fully laid down by Mr. Bland', but mentions firing by ranks as one way of firing.⁴³³ Despite the comprehensive nature of Bland it would seem that there was still a considerable amount of variety of opinion over the details of how a battalion of infantry should fight. This was not helped by the brevity of the 1728 Regulations, which would have left officers with no alternative but to consult Bland on the finer points of drill. What is clear is that the underlying principal of close range firing by platoons organised into firings and the subsequent assault with the bayonet against infantry, if necessary, was still the basis of the way British infantry intended to fight.

A further change to the process of loading and firing made its first appearance in the 1740 edition of the *1728 Regulations*. Until then, officially at least, muskets had been primed from a small flask before a cartridge was opened and loaded into the barrel. The 1740 edition allowed for the musket to be primed direct from a cartridge, thus

⁴³¹ Kane, *Campaigns*, pp. 119-120.

⁴³² Kane, *Campaigns*, pp. 125-126.

⁴³³ Lt. Gen. Richard, 3rd Viscount Molesworth, *A Short Course of Standing Rules, for the For the Government and Conduct of an Army* (London, 1744), p. iv and p. 12.

saving valuable seconds in the loading process.⁴³⁴ During the mid-eighteenth century wooden ramrods were gradually replaced by steel ramrods and despite some early problems with them bending or being too brittle and breaking they also seem to have speeded up the rate of fire.⁴³⁵ Combined with the Platoon Exercise Houlding suggests that these changes increased the rate of fire of the infantry from two to three rounds a minute.⁴³⁶

While Kane probably wrote his book around 1730 it was not published until 1745 and, although he shed a little light on the way British infantry were intended to fight, it was with Bland and the 1728 Regulations to guide them that they embarked upon the War of Austrian Succession.

La Fausille's manuscript, written around 1750-1752, contained a considerable amount of information that cast light upon the battlefield practices of British infantry during the War of Austrian Succession in a manner that a theoretical drill book could not. Not least he identifies the French contribution to British success. He first emphasised the importance of preventing 'the men from throwing away their Fire to no purpose, or at too great a distance, as our men, being then Novices, did at the Battle of Dettingen', explaining that the first discharge of fire in a battle is the one that does the greatest execution as it was properly loaded. As well as happening at Dettingen he added that long range fire almost happened again at Fontenoy. He

⁴³⁴ Houlding, *Fit for Service*, p. 147.

⁴³⁵ In 1726 Henry Hawley, Colonel of the 33rd Foot expressed a preference for wooden ramrods, Rev. P. Sumner (ed.), 'General Hawley's "Chaos"', *JSAHR*, vol. xxvi, (1948), p. 93, however, in 1754 the 3rd Foot were reported as loading 'very slow' in part because they had wooden ramrods, Houlding, *Fit for Service*, p.147, n. 105.

⁴³⁶ Houlding, *Fit for Service*, p. 194.

then stated that 'the French generally begin to Fire at a great distance'.⁴³⁷ Amherst, later to be Commander-in-Chief in North America recorded that at Fontenoy the French opened fire at 'about 80 yards distance'.⁴³⁸ Citing Laffeldt as an example La Fausille described how the British infantry continued to advance, ignoring the French fire, the French then hurried to reload, doing so without using the ramrod, but simply dropping the open cartridge into the musket and then banging the butt on the ground to get the cartridge and ball to drop to the breech. The effect of loading in this manner, now commonly referred to as tap-loading, is that the balls do not travel far or with any great force, in fact, if the ball lodges in the barrel some way short of the breech, it can result in the barrel bursting. La Fausille added 'this Preserved many of our men at the Battle of Laffelt'.⁴³⁹ He then described how they advanced against the French, ignoring their fire, until they came up to the hedge and ditch in front of the French. The British then fired and 'leaping in among them immediately after it, thus struck them with such a terror, that they gave way'. He made the observation that British battalions were able to attack in this manner three times and lost fewer men than allied battalions who tried to rely entirely upon firepower to defeat the French.⁴⁴⁰

La Fausille observed that once an engagement had begun the pressure of combat 'rarely affords the men time to Prime, Load and Ram down their Cartridge properly'. That tap-loading was a common practice in British infantry regiments was clear from his advice on what to do after an enemy had been broken. First the battalion was to

⁴³⁷ Cumberland Papers, Orderly Book Extracts, 2/2 ff. 3v-4r (M).

⁴³⁸ Centre for Kentish Studies (CKS), Amherst Papers, U1350/01/2.

⁴³⁹ Cumberland Papers, Orderly Book Extracts, 2/2 f. 3v (M).

⁴⁴⁰ Cumberland Papers, Orderly Book Extracts, 2/2 f. 4r (M).

be put in order and then it was to 'fresh Prime, Load or Ram down the charge of such as are Loaded'.⁴⁴¹ Ramming tap-loaded charges and freshly priming muskets would have ensured that the battalion's next fire was as effective as any first fire, it was effectively starting again.

Bland also wrote about tap loading in his manual, reinforcing that it was a common practice. He advised that loading quickly was facilitated by ensuring that the cartridges were made so that after being placed in the barrel a thump on the ground with the butt end of the musket would make them drop to the breech. Like La Fausille he did not greatly approve of it and listed his objections. First, if the barrel was dirty, the cartridge could stick part way down, risking the barrel bursting. Secondly the paper of the cartridge could get between the powder and the touch-hole. Thirdly, the power of the shot could be greatly reduced so that 'the Ball will either drop within two or three Yards, or not have Force enough to do much Execution'. He added that if the men 'are not press'd too close by the Enemy, the Ramming down of the Cartridge should not be omitted in Service'.⁴⁴²

Despite Bland's objections there are clear indications in order books that tap-loading was not only acceptable, but was planned for in the preparation of ammunition. An order of February 1743 to the British army in Europe instructed that if any unit had balls too big for their muskets they were to hammer them 'on every side, to reduce them to such a size as they may go easily down in a Cartridge, allowing for the

⁴⁴¹ Cumberland Papers, Orderly Book Extracts, 2/2 f. 5r (M).

⁴⁴² Bland, *Military Discipline*, pp. 73-74.

fouling of a piece by often firing'.⁴⁴³ It would appear, while the dangers of tap-loading and the benefits of properly loaded muskets were well understood, that at short range, the benefit of an increase in the speed of loading, and thus the rate of fire, outweighed any loss in effectiveness. Loading without using the rammer could have shortened the loading time by as much as half. This meant that the well loaded first shots of the firings could be fired with shorter intervals between each firing as the first firing to fire would have reloaded in half the usual time. This would have increased the intensity of the firing and thus its effect on an enemy.

The first battle of the war, Dettingen, 1743, was also the last occasion upon which British troops were commanded in the field by their monarch, in this case George II. The British with their Hanoverian and Austrian allies were outmanoeuvred by the French and found themselves trapped between the river Main and forest covered hills with the French in front, behind and across the river. Fortunately, errors by the French gave the British and their allies a chance to fight their way out when the French force blocking their march launched an unnecessary attack.⁴⁴⁴

It is general stated that the platoon firing of the infantry pretty much fell apart with every man firing in his own time, despite which the British and their allies were able to achieve a notable victory over the French. The main source for this assertion is a letter from Lieutenant Colonel Russell of the Guards in letters to his wife.

That the Austrians also behaved well is also true; that except one of their battalions which fired only once by platoons, they all fired as irregular as we did; that the English infantry behaved like heroes, and as they were the major part of the action, to the honour of the day was

⁴⁴³ Cumberland Papers, Orderly Book, 1742, Vol. I, 3 February (M).

⁴⁴⁴ Rex Whitworth, *Field Marshal Lord Ligonier* (Oxford, 1958) pp. 69-88.

due; that they were under no command by way of Hide Park firing, but that the whole three ranks made a running fire of their own accord, and at the same time with great judgement and skill, stooping all as low as they could, making almost every ball take place is true; that the enemy when expecting our fire, dropped down, which our own men perceiving, waited till they got up before they would fire, as a confirmation of their coolness as well as bravery, is very certain; that the French fired in the same manner, I mean like a running fire, without waiting for words of command, and that Lord Stair did often say he had seen many a battle and never saw the infantry engage in any other manner is as true.⁴⁴⁵

Russell is clearly stating that the British infantry did not fire by platoons as practised in Hyde Park. The London based Guards' Regiments drilled in Hyde Park and the term Hyde Park became synonymous with doing things strictly according to regulations. In another letter Russell wrote 'our men and their regimental officers gained the day; not in the manner of Hyde Park discipline, but our foot almost kneeled down by whole ranks, and so fired upon 'em a constant running fire'.⁴⁴⁶ He goes on to say that each man fired as an individual, and that Lord Stair stated that was what always happened in a battle. The extent to which this sweeping statement, which could be read as applying solely to the French, can be relied upon is open to question. Lord Stair had been the army's Commander-in-Chief until his position was usurped when George II took personal command and there is little doubt that Stair was sulking.⁴⁴⁷ Similarly Russell was in no mood to pay compliments to the line battalions as the Guards had been with the rear-guard of the army and saw no action. In fact Russell wrote to his wife that his view of the battle was from a hill two miles away.⁴⁴⁸ More reliable are the accounts of those in the infantry who were

⁴⁴⁵ HMC, *Report on the Manuscripts of Mrs. Frankland-Russell-Astley of Chequers Court, Bucks* (London, 1900), p. 278.

⁴⁴⁶ *Chequers Court*, p. 260-262.

⁴⁴⁷ In a letter Stair wrote 'I was entirely ignorant of all the operations of our army, excepting on the day of battle, when I thought it was my duty to meddle. The consequences of our victory might have been as great as our hearts could desire, but those whose advice the King took have not thought fit to take any advantage of the French'. HMC, *Manuscripts of the Earl Of Buckinghamshire* (London, 1895), p. 90.

⁴⁴⁸ HMC, *Chequers Court*, p. 252.

directly involved, including a young James Wolfe with Duroure's Regiment. He is clear on the point that his battalion and several others opened fire at far too great a range.⁴⁴⁹ Col. Duroure, acting as Adjutant General, wrote that the British infantry fired 'not by Platoons but with perpetual Volleys from Right to Left, loading almost as fast as they fired without ceasing, so that the French were forced to retreat'.⁴⁵⁰ La Fausille described how once some battalions began to fire firing broke out right along the line of British infantry even though in places the French were even out of cannon shot.⁴⁵¹ He also recounted how, when a battalion commander asked a general whether he should order his battalion to fire by platoons or ranks the general advised him to keep his men in good order, try to hold their fire to a very close range and he would be delighted to see either fire by platoon or ranks as he 'never did yet but on a Field day or at a Review'.⁴⁵² However, at least one British infantry battalion seems to have managed to fire correctly, by platoons, in firings. An officer in the Royal Welch Fusiliers described how they advanced to within sixty paces of the French before firing.

Our people imitated their predecessors in the late war gloriously, marching in close order, as firm as a wall, and did not fire till we came within sixty paces, and still kept advancing; so that when we had soon closed with the Enemy, they had not retreated: for when the smoak blew off a little, instead of being among their living we found the dead in heaps by us; and the second fire turned them to the right about, and upon a long trot.⁴⁵³

This describes the battalion continuing to advance after giving the first firing and on emerging from the smoke of their fire finding the French had taken heavy casualties. The battalion's second firing then caused the enemy to run. This feat was then repeated against three other French regiments, including a Guard's regiment that

⁴⁴⁹ Beckles Willson, *The Life and Letters of James Wolfe* (London, 1909), pp. 36-38.

⁴⁵⁰ Lt. Col. EAH Webb, *History of the 12th (The Suffolk) Regiment* (London, 1914), p. 63.

⁴⁵¹ Cumberland Papers, Orderly Book Extracts, 2/2 f. 3v (M).

⁴⁵² Cumberland Papers, Orderly Book Extracts, 2/2 f. 4r (M).

⁴⁵³ *Gentleman's Magazine*, 1743, vol. XIII, p. 386.

retreated before the Fusiliers could fire. This officer was clear in his views about the reasons for the success of his regiment, emphasising the importance of getting close to the enemy before firing.

What preserved us was keeping close order, and advancing near the enemy ere we fir'd. Several that popp'd at one hundred paces lost more of their men, and did less execution, for the French will stand fire at that distance, tho' 'tis plain they cannot look men in the face.⁴⁵⁴

In his official report Col. Duroure not only gave his account of what happened, but also made mention of how the infantry had been ordered to fight. It was 'judged that the whole fire had been given without Orders, against the Directions to preserve ours, and first to receive the Enemy's, then giving ours and charging with Bayonets'.⁴⁵⁵ A clear statement that if Dettingen had been won by firepower alone that had not been the intention.

At Dettingen the French cavalry enjoyed an initial success against the British infantry. The French Household cavalry broke through the first line of British infantry, but did not cause it to retreat. Rather the words of Bland about the superiority of infantry over cavalry were vindicated when the Grenadier company of Huske's 32nd, in the second line, held off the cavalry while the battalion finished forming.⁴⁵⁶ Then, trapped between the first and second line of infantry, the cavalry were shot to pieces.

For events at Fontenoy in 1745 there is a French account of cavalry attacking British infantry. 'Our Cavalry, which advanced before them immediately, could not sustain the terrible Fire made by that Line of Infantry... Several of our Squadrons rallied, but

⁴⁵⁴ *Gentleman's Magazine*, 1743, vol. XIII, p. 386.

⁴⁵⁵ Webb, *Suffolk Regiment*, p. 70.

⁴⁵⁶ Anon, *British Glory Reviv'd* (London, 1743), p. 10.

were again repuls'd by the prodigious Fire of the Enemy's Infantry.'⁴⁵⁷ Although Fontenoy was a defeat for the Allied army under the Duke of Cumberland the British infantry more than held their own against both French cavalry and infantry.⁴⁵⁸

Following Dettingen the infantry had trained hard in their battalion firings, as shown by an order of 1 December 1744;

The Regt which fired ball against the wall of ye Capuchin's near the Nonnen Bosh, are to do so no more, but to find some other place, if they have occasion to fire anymore.⁴⁵⁹

Whilst not a great deal of detail of the infantry battle at Fontenoy has come down to us, the notable exception to this is the firefight between the British and French Guards early on in the battle, when the benefits of such training were clear. Three battalions of British Guards were on the right of the first line of the British infantry attacking the French position. In an incident immortalised by Voltaire they came face to face with the French Guards, the Swiss Guards and the Regiment Courten. According to Voltaire, Lord Hay, a captain in the First Guards, stepped forwards and invited the French to fire first. A French officer responded saying that they never fired first.⁴⁶⁰ The truth, as related by Lord Hay, was more prosaic. He saluted the French, toasted them from his hip flask and told the French he hoped they would not swim the nearby Scheldt as they had the Maine at Dettingen, a reference to their rout at that battle.⁴⁶¹ It is unclear who did fire first. Voltaire suggests that the French infantry were so stunned by the British fire that they didn't fire at all.⁴⁶² An account in

⁴⁵⁷ Anon, *The Journal of the Battle of Fontenoy... translated from the French* (London, 1745), p. 6.

⁴⁵⁸ Whitworth, *Ligonier*, pp. 97-104.

⁴⁵⁹ Cumberland Papers, Orderly Book, vol. 6/88 (M).

⁴⁶⁰ William F Fleming (trans.), *The Works of Voltaire* (New York, 1901), vol. xvi, p. 238.

⁴⁶¹ Thomas Carlyle, *History of Friedrich II of Prussia* (New York, 1864), vol. iv, pp. 438-9.

⁴⁶² Fleming, *Voltaire*, p. 239.

a British newspaper stated that the French fired first.⁴⁶³ Whether they fired first or second the effect of the British fire was devastating. Voltaire says that the fire was by platoons and it seems most likely that the Guards fired twice by firings at a range of less than thirty yards. The total strength of the three guard's battalions at Fontenoy was approximately 1,970 rank and file, meaning that the French received approximately 3,900 rounds of musket fire.⁴⁶⁴ Voltaire records this fire as causing a total of 912 killed and wounded, giving the Guards a hit rate of about 23%.⁴⁶⁵ By contrast the three battalions of Guards suffered a total of 736 killed and wounded for the whole battle.

British participation in the War of Austrian Succession was interrupted by the Jacobite Rebellion of 1745 when Prince Charles Edward Stuart, with French support, landed in Scotland and raised a Scottish army to attempt to recover the Crown for his father. The eyewitness descriptions of combat that survive from that domestic affair allow a far more detailed analysis of how the British infantry fought than has so far been possible. From the beginning it was recognised that the threat posed by Highland forces was quite different from that of conventional European forces. Their tactics had been described by Lt. Gen. Hugh Mackay who had been beaten by them at Killiecrankie.

Their way of fighting is to divide themselves by clans, the chief or principal man being at their heads, with some distance to distinguish betwixt them. They come on slowly till they be within distance of firing, which, because they keep no rank or file, doth ordinarily little harm. When their fire is over, they throw away their firelocks, and everyone drawing a long broad sword, with his

⁴⁶³ *Penny Post* or *The Morning Advertiser* (London), May 10, 1745 – May 13, 1745, Issue 317.

⁴⁶⁴ Cumberland Papers, Orderly Books, vol. 6/176 (M).

⁴⁶⁵ Fleming, *Voltaire*, p. 239.

targe (such as have them) on his left hand, they fall a running toward the enemy.⁴⁶⁶

Lieutenant General Henry Hawley wrote a similar account of the Highlander's tactics, adding that they normally formed four deep, with their best men in the front rank, but that by the time they reached their enemy they were twelve or fourteen deep.⁴⁶⁷ The Duke of Cumberland added further detail when he gave his orders on how the Highlanders were to be fought. His orders explained that the object of the Highlanders firing 'at a distance' was to draw their enemy's fire, adding that after firing they lay down to avoid that return fire. This enabled them to charge home with swords against unloaded muskets.⁴⁶⁸

Mackay's attempts to overcome the Highland tactics ended in defeat.⁴⁶⁹ Hawley's response was to advise firing by ranks, the fire directed at the centre of the attacking body of Highlanders, starting with the rear rank, but not firing until the range was 'ten or twelve paces'. He deemed it necessary to wait until the range was so short because the speed of the advance would prevent reloading. Cumberland's orders were more comprehensive as he allowed for the enemy advancing slowly as well as for the Highland charge. First he specified that a battalion must be in eighteen platoons. If the advance was slow he ordered that firing should be by half firings, that is three platoons at a time, in the case of a rapid advance the fire of the whole battalion was to be reserved until the range was ten or twelve yards. He makes no

⁴⁶⁶ Mackay, *Memoirs*, p. 51.

⁴⁶⁷ Katherine Tomasson and Francis Buist, *Battles of the '45* (London, 1978, 1st pub. London, 1962), pp. 93-94.

⁴⁶⁸ CKS, Amherst Papers, Volume 02, Military Orders 9 November 1745 to 13 December 1745, 30 November, 1745.

⁴⁶⁹ See above, pp. 93-94.

mention of firing by ranks, so it would seem the whole battalion was to fire together.⁴⁷⁰

The first infantry to meet the Jacobite army were those of the scratch force of Lieutenant General Sir John Cope at Prestonpans on 21 September, 1745. A considerable amount is known concerning events at Prestonpans because there was a subsequent enquiry into the defeat of Copes little army, although the main interest of the enquiry was the conduct of the senior officers, not the tactics employed. What is clear is that there was no attempt to fight the Jacobite army in anything other than a completely conventional way. The infantry was described as completely formed and having been divided into platoons and firings.⁴⁷¹ When the Jacobites attacked first the dragoons broke and then the infantry gave what was described as ragged fire and also broke and ran.⁴⁷²

At the battle of Falkirk, 17 January, 1746, the British army was led by Lt. Gen. Hawley and, following the defeat of his cavalry, most of his infantry turned and ran in the face of the Highland charge and a raging storm with rain and sleet.⁴⁷³ However, some detail is available of how the infantry battalions that stood fought the Jacobites. In particular the description by a sergeant in Barrel's Regiment describes how the front rank knelt while the centre and rear rank fired continually.⁴⁷⁴ This is confirmed

⁴⁷⁰ CKS, Amherst Papers, Volume 02, Military Orders 9 November 1745 to 13 December 1745, 30 November, 1745.

⁴⁷¹ Anon, *The Report of the Proceedings and Opinion of the Board of General Officers on their Examination into the Conduct, Behaviour, and Proceedings of Lieutenant-General Sir John Cope* (London, 1749), pp. 53-53 and p. 69.

⁴⁷² For general accounts of the battles of the '45 Rebellion see Christopher Duffy, *The '45* (London, 2003); Stuart Reid, *1745 A Military History of the Last Jacobite Rising* (Staplehurst, 1996).

⁴⁷³ For a study of the battle of Falkirk see Geoff B. Bailey, *Falkirk or Paradise* (Edinburgh, 1996).

⁴⁷⁴ *London Evening Post*, 6 February, 1746, Issue 2849.

by a private in Barrell's who referred to the battalion keeping a reserve, that is the front rank.⁴⁷⁵ A description of the Royal Scots that appeared in a Dublin newspaper described them firing on attacking Highlanders, the rear rank first, then the centre rank and the front rank when the enemy were within a few paces. This was sufficient to repel the attack.⁴⁷⁶ There is a suggestion that while the front rank was held as a reserve, the centre and rear ranks fired by platoon rather than whole ranks, but on the whole those battalions that stood appear to have adhered to Hawley's advice.⁴⁷⁷

Prior to the Battle of Culloden the Duke of Cumberland assembled his army at Aberdeen. There the infantry were carefully trained for the forthcoming confrontation with the Jacobite army and the Highland charge in particular. On 2 April 1746 Cumberland ordered:

The Royal North British Fuzileers to be out in the Park tomorrow at 11 o'clock there to practice the motions of alternate firings by platoons from ye right and left to ye centre reserving the fire of ye front rank & Grenadiers.

These were followed by the Royal Scots, Price's, Barrell's and 'Every Regiment to take their turns afterwards.'⁴⁷⁸ This method of firing was a departure from the normal practice of firing by platoons organised into firings. In some ways this was similar to what Bland advised for dealing with cavalry, with the front rank reserved, but alternate firing was something that he advised against. He described the way the Dutch conducted alternate firing when advancing and although he thought it could be very effective against a stationary enemy he considered it to be vulnerable to a sudden counterattack while the platoons were reloading. He emphasised that it was

⁴⁷⁵ *London Evening Post*, 30 January, 1746, Issue 2845.

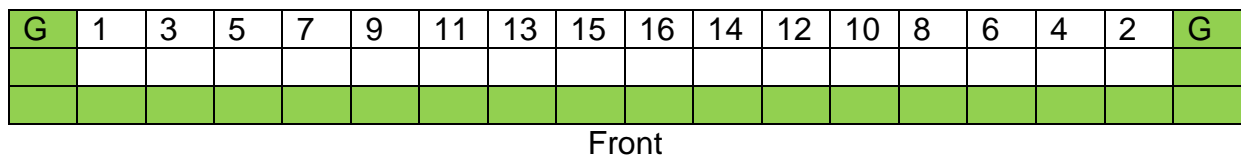
⁴⁷⁶ George Faulkener, *The Dublin Journal*, 28 January to 1 February 1746, Issue 1971.

⁴⁷⁷ Anon, *The History of the Rebellion in 1745 and 1746 Extracted from the Scots Magazine* (Aberdeen, 1755), p. 124.

⁴⁷⁸ Nottingham University, Hallward Library, Galway Collection, Ga 12835.

necessary for a battalion firing in this manner to advance slowly, 'to give the Men Time to load their Arms before they approach too near the Enemy'.⁴⁷⁹ This would seem to make it unsuitable as a method of dealing with the fast advancing Highlanders. However, the suggestion that a battalion could be left vulnerable while men reloaded also indicates that the whole fire of a battalion could be delivered very quickly in this manner, something that would be desirable against Highlanders closing quickly. Should that fire not stop an attack then the fire of the reserved Grenadiers and front rank could be delivered at a range of only a few yards. This intention of delivering the maximum available fire in a short time at close range is borne out by a passage in a contemporary history of the rebellion that described the infantry at Culloden as firing 'according to Orders, viz. the 2d and 3d Rank, as they were within 30 Yards, and the 1st, just as they were at the Muzzles of their Guns'.⁴⁸⁰

Figure 6.4: Platoon Firing at Culloden



Green = Front rank and Grenadiers held in reserve

White = 2nd and 3rd ranks of platoons firing in the sequence indicated from the flanks to the centre

In addition to a different form of firing the infantry also received instruction in a new way of using the bayonet. From its introduction the bayonet had been treated in the same manner as the pike and for combat it was held in exactly the same manner as

⁴⁷⁹ Bland, *Military Discipline*, pp. 145-47.

⁴⁸⁰ Anon, *The History of the Rebellion, 1745 and 1746* (no place or date), p. 216.

the 'charge for pike' position. The soldier turned his body to the right with the musket held horizontally under the chin across the chest. The left hand supported the musket under the chin while the right arm was fully extended and the right hand held the musket butt. Drill for fighting with the bayonet was limited to simply thrusting the musket forward, bringing the right hand to the right shoulder and extending the left arm, all with the musket held horizontally at shoulder level. It would seem improbable that soldiers in hand to hand combat only plied their bayonets in this manner and it is possible that this lack of drill, when compared to the extensive instructions for musketry, might be partly responsible for the idea that firepower was more important than the bayonet. However, the amount of instruction required for an activity is not necessarily an indication of its relative importance.

The drawback with this drill when fighting Highlanders armed with sword in the right hand and targe on the left arm was that any thrust with the bayonet was easily caught on the targe and the musket was also easily knocked aside by the targe leaving the back of the soldier exposed to the sword. The solution to this problem was simple and introduced by the Duke of Cumberland: 'his Highness took the pains to confer with every Battalion of Foot, on the proper Method of using the Musket and Bayonet to Advantage against the Sword and Target'.⁴⁸¹ He simply instructed the soldiers to reverse the position so that they faced to the left of their unit with the right hand under their chin and their left hand on the musket butt. The intention was that any thrust with the bayonet would then tend to come at a Highlander's exposed right side instead of the left that was covered by the targe.⁴⁸² Although Cumberland is

⁴⁸¹ John Marchant, *The History of the Present Rebellion* (London, 1746), pp.398-99.

⁴⁸² Anon, *The History of the Rebellion*, p. 216.

usually credited with devising this drill, it is described in an article in the Gentleman's Magazine for January 1746.⁴⁸³

Cumberland's army came face to face with the Jacobite army of Charles Edward Stuart on Culloden Moor on 16 April 1746. What followed was Cumberland's army simply, efficiently and professionally going about its business, particularly the infantry. The Jacobite army was organised in two lines, the front consisting of the Highland units with the Lowland units and French regulars in the second line. It was the Highlanders in the front line that attacked, moving forward in three large bodies. That which moved towards Cumberland's right flank did not make contact. Three times it advanced, trying to provoke the infantry into firing too soon, but as Cumberland wrote in a letter to Lord Loudon; 'On our right tho they came on with great fury, our Men did not take their firelocks from their shoulders tho they advanced three times within less than an hundred yards of us'.⁴⁸⁴ It was also probable that the Jacobites were inhibited by the presence of three squadrons of cavalry on that flank.

On the other side of the battlefield the other two bodies of Highlanders coalesced into one single mass that struck the battalions of Barrell and Monro. Because of the surviving accounts and an accurate list of the strength of Cumberland's army it is possible to examine in some detail the combat that ensued.

⁴⁸³ 'Essay on Regular and Irregular Forces', *The Gentleman's Magazine* (London), vol. xvi, p.31.

⁴⁸⁴ Cumberland Papers, Box 14/57 (M).

Barrell's Regiment took the brunt of the Highland charge. The strength of Barrell's that day was 373, all ranks, of whom 325 were carrying muskets in the three deep platoons.⁴⁸⁵ At this time infantry battalions consisted of nine hat companies and one grenadier company. Given the low strength of Barrell's it is probable that it was organised into a total of twelve platoons, giving a platoon strength of twenty seven men.⁴⁸⁶ This would mean that the centre and rear ranks of the ten hat platoons contained 180 men and the reserve had 145 men. If they fired as related the platoons would have commenced firing at thirty yards in what one eyewitness described as a 'running fire', followed by the reserve who 'received them with their fire upon the Points of their Bayonets'.⁴⁸⁷ They appear to have only fired once before the Highlanders reached them, a total of 325 rounds.

Monro's regiment was the largest battalion on the field with a total strength of 491 men and 426 men in the platoons.⁴⁸⁸ An account by a corporal in the regiment states 'we fired at about 50 yards Distance...they still advanced, and were almost upon us before we had loaden again. We immediately gave them another full fire'.⁴⁸⁹ This probably means that the platoons of the centre and rear ranks fired twice, almost certainly tap loading to get in a second round, followed by the reserve. Thus 236 men fired twice and 190 fired once, a total of 662 rounds. The corporal of Monro's continued that 'the Front Rank charged their Bayonets Breast high, and the Centre and Rear Ranks kept a continual Firing...most of us having discharged nine Shot

⁴⁸⁵ Cumberland Papers, Box 14/7 (M).

⁴⁸⁶ See above, p. 148 .

⁴⁸⁷ Anon, *The History of the Rebellion*, p. 216; Andrew Henderson, *The History of the Rebellion* (London, 1758, 5th Edn.), p. 327; Michael Hughes, *A Plain Narrative and Authentic Journal of the Late Rebellion Begun in 1745* (London, 1747), pp. 38-39.

⁴⁸⁸ Cumberland Papers, Box 14/7 (M).

⁴⁸⁹ Newcastle Journal, 1746, as cited in Stuart Reid, 'The Battle of Culloden: 'A Narrative Account' in Tony Pollard (ed.), *Culloden, The History and Archaeology of the Last Clan Battle* (Barnsley, 2009), p.114.

each'.⁴⁹⁰ Monro's suffered a total of eighty two killed and wounded in the battle, allowing for which the battalion could have fired approximately two thousand rounds at ranges well under fifty metres.

To the right of Monro's was Cambell's Royal Scots Fusiliers. Although not subsequently involved in hand to hand fighting part of the Highland charge crossed its front. With 412 men in its platoons and assuming its reserve did not fire it is likely that it fired about 220 rounds at the Highlanders, if it only fired once. The initial fire received by the front of the Highland charge was probably in excess of one thousand rounds, many at point blank range. The corporal of Monro's wrote that this 'made hundreds fall'.⁴⁹¹

It was at this point that Cumberland's new bayonet drill came into play and numerous letters and accounts speak of its effectiveness. Cumberland himself wrote 'our Men fairly beat them & drove them back with their Bayonets & made a great slaughter of them'.⁴⁹² According to another account 'the Soldiers mutually defended each other, and pierced the Heart of his Opponent, ramming their fixed Bayonets up to the Socket'.⁴⁹³ Another eyewitness claimed 'there being scarce one Soldier in Barreyl's Regiment who did not each kill several Men; and they of Monro's which ingaged did the same'.⁴⁹⁴

⁴⁹⁰ Pollard, *Culloden*, p.119.

⁴⁹¹ Pollard, *Culloden*, p.114.

⁴⁹² Cumberland Papers, Box 14/57 (M), Cumberland to Lord Loudon, 19 April 1746.

⁴⁹³ Henderson, *History of the Rebellion*, p. 327.

⁴⁹⁴ Hughes, *A Plain Narrative*, p. 40.

Some Highlanders passed around the left flank of Barrell's and between Barrell's and Monro's, over-running two artillery pieces in the gap. Pairs of three-pounder cannon had been placed between the battalions in the front line and these undoubtedly added many casualties, the guns next to Barrell's firing their last shots of grape at only six feet.⁴⁹⁵ The Highlanders who passed Barrell's then came under fire from regiments in the second line. Subsequently these moved forward to support Barrell's and Monro's. In particular Edward Wolfe's regiment marched to the left of Barrell's and placed itself at right angles to the front line where it commenced firing. The account of an officer of that regiment says that the battalion fired five or six times. The strength of the regiment was 324 in the platoons and if this firing was carried out with the front rank and grenadier platoons reserved it would have fired between nine hundred and one thousand rounds into the Highlanders at close range. Ligonier's, Bligh's and Sempill's regiments also added their weight to this fire with a total of 1,157 muskets in their platoons. There is no indication of how many rounds they fired, but if, like Wolfe's, they fired five rounds each that would have been another 3,200 rounds.

All in all it would appear that the Highlanders received between six and seven thousand rounds from the battalions of British infantry, many at ranges well under fifty metres. The strength of the Highlanders who attacked the British left flank battalions was about 2,500.⁴⁹⁶ According to the officer of Monro's left flank grenadier platoon 'we laid about 1600 dead on the spot'.⁴⁹⁷ The figures for rounds fired would

⁴⁹⁵ Tomasson and Buist, *Battles of the '45*, p. 158.

⁴⁹⁶ This figure was arrived at using information in two chapters, 'The Jacobite Army at Culloden' and 'The Battle of Culloden, A Narrative Account' by Stuart Reid in Pollard, *Culloden*.

⁴⁹⁷ Anon, *The History of the Rebellion ... from the Scots Magazine*, p. 197

seem to be reasonably robust, the various sources are consistent. It would also seem that most, if not all, were fired at ranges under fifty metres and that a considerable proportion were fired at much closer ranges. The area where the greatest doubt is to be found is in the numbers of casualties actually inflicted by this fire. However, a return of approximately 1600 casualties for six or seven thousand rounds is a hit rate of roughly 22% to 26%, which is in keeping with the 23% suggested for Fontenoy. Even if the casualty figure is high and includes casualties from other parts of the battlefield a figure of 1,000 casualties still gives a rate of 14% to 16%. It would be unwise to place too much reliance on these figures, but they do give an indication of the capability of British musketry to inflict high casualties at the short range that they seem to have preferred to engage at. Every soldier with a musket had twenty four rounds at Culloden, yet Wolfe's battalion fired only five or six rounds a man.⁴⁹⁸ It would seem most likely that they stopped firing because there was nothing left to fire at.

Following the conclusion of the Jacobite Rebellion the British army returned to Europe and on 11 October 1746 was engaged with its allies in the battle of Rocoux. Contemporary accounts of this defeat at the hands of the French tell us nothing about how the British infantry fought, but do tell that they fought well.⁴⁹⁹ On 2 July the following year the allied army was again beaten at Laffeldt.⁵⁰⁰ On this occasion one detail in a letter from a British officer sheds a little light on infantry combat doctrine. The letter confirms La Fausille's statement that some British battalions attacked the

⁴⁹⁸ Nottingham University, Hallward Library, Galway Collection, Ga 12835.

⁴⁹⁹ Whitworth, *Ligonier*, pp.134-41.

⁵⁰⁰ Whitworth, *Ligonier*, pp.149-60.

French three times in the fight for possession of the village of Laffeldt. The officer gives the example of Wolfe's regiment to illustrate how the British battalions fought.

Wolfe's Regiment carried into the field 24 rounds a man. This they made use of. Afterwards they had a supply of 8 rounds a man more. After this was spent, they made use of all the ammunition amongst the dead and wounded, both of their own men and the enemies. When no farther supply could be had, they formed themselves immediately to receive the enemy upon their bayonets, and being ordered to retreat did it with the utmost regularity.⁵⁰¹

Wolfe's battalion was probably involved in trying to repel at least four French attacks on Laffeldt as the village repeatedly changed hands. With firing minimised in the assault it would appear that Wolfe's men fired in excess of thirty rounds each in defence or six or seven rounds a man against each French attack. This represents a considerable amount of sustained firing and paints a different picture to the short, sharp bursts of fire followed by the vigorous use of the bayonet that seem to have been preferred. It may be that the nature of this fighting, in and around a village, hedges are referred to in several accounts, forced the infantry into extended fire fights. However, it clearly demonstrates that when necessary British infantry was capable of considerably extended periods of sustained fire.

Following the effective end of the war and while peace negotiations were in progress the Duke of Cumberland and the army were camped at Eindhoven. The organisation of firing was further developed and new instructions were issued on 27 August 1748. La Fausille recorded the form of these in a diagram, figure 6.5 below, and further details appear in a publication of 1757 that included Kane's works.⁵⁰²

⁵⁰¹ *Gentleman's Magazine*, vol. XVII, 1747, p. 345.

⁵⁰² Cumberland Papers, Orderly Book Extracts, 2/2 f. 61v (M), and Anon, *A System of Camp Discipline... Kane's Discipline for a Battalion on Action... General Kane's Campaigns...* (London, 1757), pp. 29-31.

Figure 6.5: Directions for Firings in Battalion by Platoons, Sub-Divisions & Firings given by HRH at Eyndhoven, August the 27th NS 1748⁵⁰³

1	1	1	3	3	3	5	5	5	6	6	6	4	4	4	2	2	2
3	1	2	1	2	3	1	2	3	3	2	1	3	2	1	2	1	3
G	1	5	3	7	4	8	2	6	G								
		1		2		3		4									

Front

Top line; Firing by platoons, number in firing,(alternating right and left to the centre), over number of firing (red, first; yellow, second; green, third)

Middle line; firing by Sub-Divisions, order of firing, alternates right and left with the right hand sub-division of each grand division first.

Bottom line; Battalion Grand Divisions (not used for firing)

According to these instructions a battalion was to be divided into two grenadier platoons and sixteen hat platoons. Although Bland, Kane and the *1728 Regulations* allow for other numbers of platoons according to the size of the battalion the Duke of Cumberland was insistent on forming eighteen. As early as 17 May 1744 he had ordered all battalions to form sixteen sub divisions, eight half divisions and four grand divisions, besides the grenadiers.⁵⁰⁴ In his first orders for fighting Highlanders he again stated that battalions were to form eighteen platoons.⁵⁰⁵ This may have been fine for the battalions of Guards, in 1744 they averaged at about 660 men in each battalion, not far short of the establishment of seven hundred privates, giving thirty six men to a platoon.⁵⁰⁶ The relatively small size of line battalions, compared to the theoretical establishment, can be seen from the morning state of the battalions at

⁵⁰³ Cumberland Papers, Orderly Book Extracts, 2/2 f. 61v (M).

⁵⁰⁴ Cumberland Papers, Orderly Book, 4/165 (M).

⁵⁰⁵ Amherst Papers, Volume 02, Military Orders 9 November 1745 to 13 December 1745, 30 November, 1745.

⁵⁰⁶ Cumberland Papers, Orderly Book 5/89 (M) and Houlding, *Fit for Service*, p. 418.

Culloden, where the battalions averaged about 367 privates. Forming eighteen platoons would have given a platoon strength of twenty, far below what Bland recommended as a minimum.⁵⁰⁷ In the case of Barrell's regiment this figure would have been eighteen, yet the commander of one Grenadier platoon wrote that he 'had 18 men killed and wounded in my platoon'.⁵⁰⁸ Furthermore, if the grenadier company accounted for a tenth of the battalion strength, as one of the ten companies, and formed two platoons, then eighteen men would have been the platoon size again. As the officer is clear that he had eighteen men killed and wounded in his platoon, and not that all of his platoon were killed or wounded, it suggests that, as recommended by Bland, the grenadier platoons had been supplemented by hatmen. This further suggests that the number of platoons was fewer than eighteen, as has been discussed above.

Prior to the directions issued in 1748 there was no suggestion that the sub divisions could be used as a fire unit, they were simply for manoeuvring. In the absence of any contemporary discussion of the development of the new directions the possibility arises that the new departure of using of sub divisions, that is pairs of platoons, as firing units was to overcome the problem of platoons that were too small to be effective on their own. As before the platoons were divided into three firings, the platoons of which could either fire singly, one after the other, or all together in a whole firing. However, before these directions could be tested in battle the War of Austrian Succession was concluded.

⁵⁰⁷ Cumberland Papers, Box 14/7 (M).

⁵⁰⁸ Anon, *The History of the Rebellion ... from the Scots Magazine*, p. 197.

There is no doubt that platoon firing was not an easy procedure to execute effectively. This was clearly demonstrated at Dettingen, the British Army's first major battle in three decades. There, inexperience caused the infantry, described by La Fausille as novices, to open fire spontaneously at far too great a range.⁵⁰⁹ Although the same thing nearly happened again at Fontenoy from then onwards the infantry carried out their firing most effectively. That effectiveness was improved by a number of changes from the days of Marlborough. Locking up made firing easier for the men and may have improved accuracy as a consequence. The Platoon Exercise, priming from the cartridge and steel ramrods all contributed to shortening the loading time, which could be further shortened under pressure by tap loading. Working against these improvements, however, was the change in battalion organisation that meant platoons and companies were no longer synonymous. However, in Europe the difficulties and complexities were overcome and the experienced infantry fighting there were able to realise the full potential effectiveness of their firepower.

The importance of experience was clearly demonstrated during the Jacobite Rebellion. Of the fifteen battalions at Culloden that destroyed the Jacobite army five battalions had been at Dettingen, another eight at Fontenoy and four had been at both. It was also experience that taught that it was better to brave the enemy fire and get close before firing and then closing with the bayonet than to give in to instinct and fire as soon as the enemy was in range. As La Fausille pointed out, it was the apparently more dangerous course of action that led to the fewer casualties.⁵¹⁰

⁵⁰⁹ *Cumberland Papers*, vol. 2/2 3v (M).

⁵¹⁰ *Cumberland Papers*, vol. 2/2 4v and 4r (M).

What is also clear from both the theory and the practice of British Infantry combat doctrine during the War of Austrian Succession is that it is still basically the same as that developed during the English Civil War. What was also demonstrated during the Jacobite Rebellion was that the infantry were capable of adapting the detailed execution of their doctrine to suit circumstances and the nature of a specific enemy, but that they did so without compromising the underlying principles of maximising short range fire and following it with effective use of the bayonet. Nor should the importance of the bayonet be underestimated. Perhaps because of the small amount of attention paid to it in the drill books, modern writers appear to have missed the significance of its use and rather emphasised the infantry's commitment to firepower. That it was an essential element of the way the infantry fought is clearly stated by Duroure in his comment on how it had been intended to fight at Dettingen and La Fausille in his remarks on Laffeldt. What British infantry generally did not do was get into long, sustained fire fights where fire alone would decide the outcome, but when necessary they were more than capable of it, as at Laffeldt.

7: The Seven Years War in Europe

The mid-eighteenth century saw a considerable amount of theoretical consideration of the conduct of war and tactical doctrine. Authors such as Saxe, Folard and Santa Cruz wrote extensively on their theories of the best way to conduct war. In Europe the military successes of Frederick the Great resulted in the widespread imitation of all things Prussian, particularly in the art of war. In the Seven Years War, 1756-1763, it also saw what has been described as the first world wide war.⁵¹¹ One consequence of this was that for the first time significant numbers of British soldiers found themselves fighting far from their habitual European campaigning grounds. Within Europe, however, the British Army was again pitted against the French. Amongst military historians, even British ones, the emphasis has been on studies of Frederick and his army. Studies of the British Army, in the European theatre, have been largely limited to biographies and narrative histories. In what little analysis there is of combat modern historians have again credited its victories to the firepower of the infantry. The comments of McLynn and Black concerning Minden have already been noted.⁵¹²

This chapter will consider the contemporary discussion of doctrine and whether or not this had any British dimension or any impact on British doctrine. This examination of the theoretical aspect of combat will be complimented by an examination of the practical, the changes to drill, both official and unofficial, and the consequent performance of the infantry on the battlefield.

⁵¹¹ Tom Pocock, *Battle for Empire, the very first world war, 1756-63* (London, 2002), p. 13; John Mollo, *Uniforms of the Seven Years War, 1756-1763* (New York, 1977), p. 7.

⁵¹² See above, p. 2.

In mid-eighteenth century Europe the military debate on doctrine was between the advocates of *l'ordre profunde*, or columnar tactics, and those of *l'ordre mince*, or linear tactics. Supporters of the column believed in cold steel and shock tactics and included such writers and military theorists as the Spanish Marquis de Santa-Cruz and the French Chevalier de Folard.⁵¹³ Another influential figure was the very successful French general, Field Marshal Maurice, Comte de Saxe. His *Reveries* was published in English in 1757, following his death in 1750, although it had been written in 1732 under unusual circumstances.⁵¹⁴ Saxe had been extremely ill and suffering from a fever when he put pen to paper to counter the boredom of his illness. Saxe maintained, from personal experience, that infantry fire was largely ineffective, although he shared the belief that fire should be reserved until the enemy had fired first. His preference was for the combination of shock tactics and cold steel, with firepower in a supporting role rather being relied upon to provide victory.⁵¹⁵ Ironically he was subsequently an eyewitness to the terrible effectiveness of British infantry firepower at Fontenoy.

Following the War of Spanish Succession there had been little development in France in infantry tactics and the method for delivering firepower remained unchanged. They had introduced a form of platoon firing in 1707, similar to the alternate form of platoon firing, but it was only used in defensive positions.⁵¹⁶ Much

⁵¹³ Chandler, *Art of War*, pp. 130-31.

⁵¹⁴ Saxe, Field Marshall Maurice, Comte de, *Reveries, or Memoirs upon the Art of War* (London, 1757).

⁵¹⁵ Chandler, *Art of War*, pp. 131-36.

⁵¹⁶ Nosworthy, *Anatomy of Victory*, pp. 60-61.

of the responsibility for this stagnation lay with the officer class.⁵¹⁷ Nosworthy has written that there was an

attitude among the nobility making up the officer class. This was the belief that what was most important in an officer was valor and honor; if the troops were brave enough and led by a daring fellow, any situation could be won.⁵¹⁸

The French experience of British firepower in the War of Austrian Succession, however, made a considerable impression. After Dettingen Marshal Noailles wrote to Louis XV:

Their infantry was closed and held themselves brazenly, they conducted a fire so lively and so sustained that the old officers never had seen anything like it, and so superior to ours one could not make any comparison, this resulting from our troops being neither exercised nor disciplined as to be suitable.⁵¹⁹

While the French continued to believe cold steel was their metier they did take steps to improve the infantry's firepower. They began 'locking up' and levelling their muskets according to the range and in 1750 three methods of delivering fire became regulation: fire by ranks, platoon fire, and *billebaude* or voluntary fire, where each soldier fired individually in his own time. Fire by ranks was finally abolished in 1753. During the Seven Years War, however, French infantry only occasionally managed to employ platoon fire, usually resorting to voluntary fire.⁵²⁰

Perhaps the most influential figure in the development of warfare in the mid-eighteenth century was Frederick the Great. Initially Fredrick was an exponent of shock action and cold steel, preferring his infantry to attack with the bayonet and without firing. However, during the course of the Seven Years War it was the Prussian infantry's ability to generate a considerable volume of fire that gained the attention and admiration of British officers. A Dutch officer wrote that the 'Prussians

⁵¹⁷ Chandler, *Art of War*, p. 125.

⁵¹⁸ Nosworthy, *Anatomy of Victory*, p. 201.

⁵¹⁹ Frederic Bere, *L'Armee Francais* (Paris, nd), p. 42, as cited in Nosworthy, *Anatomy of Victory*, p. 208.

⁵²⁰ Nosworthy, *Anatomy of Victory*, pp.209-10.

have certainly brought quick-firing to a greater degree of perfection than the troops of any other nation', but added that they did not rely on it and preferred the bayonet.⁵²¹

Among the British admirers of the Prussian army's firepower was James Wolfe, who, at the beginning of the Seven Years War was the Lieutenant Colonel of the 20th Foot and effectively in command of it. An order of his from 1753 shows how British officers were determined to do what they could to improve the effectiveness of their battalions' firepower. At a review of the 20th and the 13th regiments the Duke of Cumberland had expressed the opinion that the 13th fired faster than the 20th. The Colonel of the 20th, Lord Bury:

Commanded that we practise the same platoon exercise that they do; for to the differences between their platoon exercise and ours, his lordship ascribes their superiority in this point... he desires we may begin to practise this platoon exercise as early as possible.⁵²²

By the phrase platoon exercise Wolfe was referring to the process of loading a musket, rather than the manner of delivering fire. Regrettably his order did not explain what it was the 13th were doing that made them faster. It is possible, that as regulations often codified what had already been developed, this was a forerunner of the changes that would be brought in officially with the 1756 platoon exercise.

With the threat of a French invasion of Britain in January 1755 Wolfe wrote a set of instructions for the battalion on how it was to fight if the French landed. These included a clear allusion to the Prussian methods of firing.

⁵²¹ Knoch, 'The insufficiency of fire-arms for attack or defence, demonstrated from facts, &c', *The Edinburgh Magazine*, vol. 3 (Nov 1759), pp. 583-85.

⁵²² James Wolfe, *General Wolfe's Instructions to Young Officers* (London, 2nd Edn, 1780), p. 32.

As the alternate fire by platoons or divisions, or by companies, is the most simple, plain and easy, and used by the best disciplined troops in Europe, we are at all times to imitate them in that respect.⁵²³

It is usually assumed that this is Wolfe the innovator at work, giving him the credit for the introduction of more effective Prussian ideas of delivering fire.⁵²⁴ However, one of the captains of the 20th was the young Duke of Richmond. Richmond had travelled abroad before joining the army and had met Frederick the Great. Although Wolfe's military junior he was a person of considerable influence, being acquainted with the Duke of Cumberland, with Henry Fox as his brother-in-law and later serving as Aide-de-Camp to Prince Frederick of Brunswick.⁵²⁵ A clue that Richmond rather than Wolfe may have been behind the innovations introduced to the 20th is found in a letter from Wolfe to him after Richmond had become Lieutenant Colonel of the 33rd.

I have great hope of your success in bringing about such reformatations, as you think wanting in your Corps... & as your Grace has seen & brought away many excellent things from the Armies upon the Continent, they may, by your help, become general among our Troops, & improve them.⁵²⁶

Alternate fire, as has been shown, was used in the War of Spanish Succession until superseded by the organisation of platoons into three firings. Cumberland had made use of alternate fire against the Highland charge at Culloden, but thereafter was insistent on the forms of firing laid down in 1748. Of these firing by sub-divisions came closest to alternate fire. However, instead of each sub-division firing in turn from the flanks to the centre, alternating between the left and right halves of a battalion, first the right hand sub-division of each grand-division fired from the flanks

⁵²³ Wolfe, *Instructions*, p. 35.

⁵²⁴ For a general treatment of Wolfe as a professional army officer see Stuart Reid, *Wolfe, The Career of General James Wolfe from Culloden to Quebec* (Staplehurst, 2000).

⁵²⁵ William C. Lowe, 'Lennox, Charles, third duke of Richmond, third duke of Lennox, and duke of Aubigny in the French nobility (1735–1806)', *Oxford Dictionary of National Biography*, Oxford University Press, 2004; online edn, Oct 2008 [<http://www.oxforddnb.com/view/article/16451>, accessed 27 Feb 2012].

⁵²⁶ Maj. Gen. R H Whitworth, 'Some unpublished Wolfe Letters', *JSAHR*, vol. LIII (1975), pp. 65-86.

to the centre, alternating between the halves of the battalion, and then the left hand sub-divisions did the same.⁵²⁷ There is no known explanation of exactly why

Cumberland objected to alternate fire, but that he did was made clear in a letter he wrote when he heard that it was being practiced by troops in 1757.

I must desire that you will acquaint Sir John Ligonier, for the Army in general; & to all General officers commanding Corps, Sir John Mordaunt not excepted, that I am surprised to hear that my orders as to the Fireing and Posting of the officers, approved & confirmed by His Majesty, are changed according to the Whim & Supposed Improvements of every fertile Genius; and that therefore, it is my positive order, that... they conform exactly to those Standing orders.⁵²⁸

In this letter Cumberland is making reference to the New Platoon Exercise of 1756 which perpetuated Cumberland's 1748 firings.⁵²⁹ It is notable that with the Duke of Richmond leaving the 20th in 1756 Wolfe was quick to comply with the new regulations for all that he might complain about them. In his orders for an exercise issued in 1756 he instructed that 'The two regiments shall conform to the practice of the army in their firings, and in their telling off the battalion'. He further added that 'The firing of the infantry shall begin by platoons followed by that of sub-divisions, then by grand-divisions, as they approach nearer and nearer the enemy, so that this last firing may cease when they are within a few paces of his line.'⁵³⁰

Leaving aside for the moment the arguments concerning alternate fire, Wolfe's orders of December 1755 also contain a wealth of information on the steps that could be taken to improve a battalion's general combat readiness and firepower, regardless of how it was finally delivered. There were clear instructions that stressed

⁵²⁷ See Figure 6.5 above, p. 176.

⁵²⁸ Duke of Cumberland to Lord Barrington, 28 August, 1757 in Stanley Pargellis, *Military Affairs in North America, 1748-1765, Selected Documents from the Cumberland Papers in Windsor Castle* (New York and London, 1936), p.398.

⁵²⁹ Anon., *A New Exercise to be observed by His Majesty's Troops on the Establishment of Great Britain and Ireland* (issued London, April 1756).

⁵³⁰ Wolfe, *Instructions*, p. 55.

the importance of both marksmanship and the use of the bayonet: 'they are to be taught to fire at marks at different distances, and in different situations, to be fully instructed in the use of their bayonet' and 'to fire, kneeling and standing, to the front, to the rear, and obliquely, and from one rank to six deep'.⁵³¹ Quite how firing was to be carried out in six ranks is not explained, but it could simply be a reference to a unit parading six deep before forming into three ranks to fire. An explanation of oblique fire, however, is to be found in *The Complete Militia-Man* of 1760.⁵³² Firing at an angle to either side of a battalion presented no difficulty for the front or centre rank man. In oblique firing, however, the rear rank man, instead of presenting his musket to the right of the man in front of him, presented his musket to either the right or left of the men standing next to the man in front of him. The platoon exercise was to be practiced under different circumstances as was the use of the bayonet in attack and defence, suggesting that there was a lot more unofficial drill for the use of the bayonet than that contained in the regulations.⁵³³ The use of the bayonet was reiterated when Wolfe ordered:

If the firing is ordered to begin by platoons, either from the wings or from the center, it is to proceed in a regular manner, till the enemy is defeated, or till the signal is given for attacking them with the bayonets.⁵³⁴

The regularity of the firing was also something Wolfe emphasised:

There is no necessity for firing very fast; a cool well levelled fire, with the pieces carefully loaded, is much more destructive and formidable than the quickest fire in confusion.⁵³⁵

⁵³¹ Wolfe, *Instructions*, p. 34.

⁵³² Anon., *The Complete Militia-Man* (London), 1760, p. xiii.

⁵³³ Wolfe, *Instructions*, pp. 34-35.

⁵³⁴ Wolfe, *Instructions*, p. 49.

⁵³⁵ Wolfe, *Instructions*, p. 49.

Although the Prussian method of delivering fire was admired and imitated it would appear that British officers did not share the Prussian view that speed was everything.

Wolfe also had instructions for dealing with any attack by a column of infantry. He instructed that his soldiers were to carry 'a couple of spare balls' and if attacked by a column, and time allowed, that part of the battalion facing the head of the column was to load the extra balls and then when 'the column is within about twenty yards they must fire with a good aim, which will necessarily stop them a little'.⁵³⁶

One section of Wolfe's orders that began, 'There are particulars in relation to fire arms that the soldiers should know' is of particular interest because of the light it sheds on some of the minutiae of firing a musket. It pointed out that the power and accuracy of a musket did not improve the more powder was used, but that the best size of charge was discovered through experience, something very necessary when soldiers were issued with powder, ball and cartridge paper to make their own ammunition. In relation to this the size of cartridges was also an important matter. Muskets became fouled with powder residue after repeated firing and if a cartridge was too big it could be difficult to ram home the ball. Too large a gap between powder and ball could result in a barrel bursting. Conversely, if a ball was rammed home too hard it could inhibit the powder from burning completely, thus reducing the power of the shot.⁵³⁷

⁵³⁶ Wolfe, *Instructions*, p. 52.

⁵³⁷ Wolfe, *Instructions*, p. 40.

In April 1756 new regulations were issued, first just dealing with the platoon exercise, but subsequently expanded in the *1757 Regulations* to cover all aspects of drill.⁵³⁸ Under these regulations battalions continued to be organised for firing as had been laid down by the Duke of Cumberland in 1748. There were, however some significant changes in the way the soldiers loaded their muskets. Previously, after firing, each soldier brought his musket up to the recover position, with the musket held vertically in front of him, the lock at about neck height. The front rank rose from their kneeling position and the middle and rear ranks stepped back to a distance of six feet between each rank before reloading.⁵³⁹ According to the New Exercise the ranks were to be at one pace or two feet distance both to fire and reload. This saved the few seconds of time taken up opening and closing the ranks to load and to fire. Furthermore, instead of first coming to the recover with the musket it was instead to be brought straight from the present position for firing straight to the position for priming, again saving a few seconds.⁵⁴⁰

Another difference, albeit an apparently slight one, concerned the use of the rammer. Prior to the issue of the *New Platoon Exercise* of 1756 the *1728 Regulations* still applied to the loading of a musket, which were themselves unchanged where the rammer was concerned from the *1708 Regulations*. It took two motions to pull the rammer from the stock of the musket, then after turning it round and shortening it so the rammer head was at the muzzle it took three motions to use it to thrust the

⁵³⁸ For the full genesis of the 1756/7 regulations see Houlding, *Fit for Service*, pp. 198-201.

⁵³⁹ Bland states that for firing the ranks should be two paces apart when firing, that is six feet. Bland, *Military Discipline*, p.10 and *1728 Regulations*, p.76.

⁵⁴⁰ *A New Exercise to be observed by His Majesty's Troops on the Establishment of Great Britain and Ireland* (issued April 1756, this edition published, London, 1757) and Anon, *New Manual Exercise as performed by His Majesty's Dragoons, Foot Guards, Foot, Artillery, Marines And by the Militia* (London, 1758, 2nd Edition, Entirely Corrected and Enlarged), p. 15-16.

cartridge down the barrel. This was followed by withdrawing it to an arms length and then ramming 'down the charge with ordinary force'. It took a further three motions to pull the rammer out of the barrel, unless it was a steel one rather than a wooden one, in which case it took only two motions.⁵⁴¹ The additional weight of a steel rammer and its greater strength meant that it could be treated with more vigour as it was less likely to break.

The change from wooden to steel rammer was not without its opponents. General Hawley was blunt in his opinion in his article *Chaos*, which he appears to have written in 1726 when he was Colonel of the 33rd Foot.

The iron rammers the Foot are coming into are very ridiculous... if they have not some alloy of steel they stand bent and cannot be returned. If they have the least too much steel then they snap like glass; in wet weather or in a fog they rust and won't come out.⁵⁴²

Despite these objections the change over continued, but was slow as can be seen from an order of 22 April, 1748, 'Lord Harry Beauclerk's Regt. [31st] to send to the Train [of Artillery] tomorrow to compleat their iron Rammers', they were to be followed by the Guards and all the line regiments according to seniority.⁵⁴³

The instructions in the *1757 Regulations* were that the rammer was to be drawn from the musket stock in two motions and then to 'Ram down the Cartridge quick, and with good force; at the rebound of the rammer catch it close at the muzzle.' One further motion was sufficient to get it out of the barrel. A footnote in the regulations states,

⁵⁴¹ *1728 Regulations*, pp. 22-25.

⁵⁴² Rev. Percy Sumner (ed.), 'General Hawley's Chaos', *JSAHR*, vol. xxvi, (London, 1947), p.93.

⁵⁴³ Cumberland Papers, Order Book, 30 April to 18 June, 1748 (M).

The Firing quick depends chiefly upon the quick Loading, and that chiefly upon the dexterity of drawing the Rammer, the ramming down and returning the Rammer. This Part of the Exercise therefore requires great practice and Attention.⁵⁴⁴

This increased vigour and speed in the use of the rammer was only possible because of the introduction of the more robust steel rammer.

A battalion was arranged for firing as had been laid down by Cumberland in 1748, with two platoons of Grenadiers on the flanks and the hat companies divided into sixteen platoons, eight sub-divisions and four grand-divisions. The only difference from the 1748 arrangement was that the grand-divisions were now fire units as well as units for manoeuvring. While this *New Exercise* improved on the platoon exercise it did nothing to address two significant problems that had caused difficulties with the various firings from the 1730s onwards.

When the form of the firings and the division of a battalion into fourteen platoons had been fixed on under Marlborough in 1711 a battalion had consisted of one grenadier company and twelve hat companies. With the division of the grenadier company into two platoons, one on each flank, the hat companies were left to form one platoon each.⁵⁴⁵ In 1717 the number of hat companies had been reduced to eleven, as was still the case in 1727 when Bland's *Military Discipline* was published and the following year when the *1728 Regulations* were issued. Although Bland contained details for a variety of numbers of platoons the *1728 Regulations* still specified fourteen.⁵⁴⁶ In the 1730s, however, the number of hat companies was further

⁵⁴⁴ *A New Exercise*, 1757, p.9.

⁵⁴⁵ See above, pp. 138-39.

⁵⁴⁶ See above, p. 147.

reduced to nine, but without any compensatory alteration in the number of platoons. In fact, as has been seen, under the Duke of Cumberland the number of platoons increased so that the nine hat companies had to form sixteen platoons.

The inevitable confusion caused by breaking up the companies into a different number of platoons was further exacerbated by the way the officers of a battalion were distributed around the battalion for command and control purposes. This was done entirely according to seniority and with no regard for the position of the men in an officer's company. As was spelt out at length in the *New Exercise* and reinforced with the authority of both Cumberland and the King;

By the above scheme the Colonel and Lieutenant colonel are in the Front, and the eldest Captain in the Center of the Rear; a Captain commands each Grand Division, the Senior Lieutenants command every other Sub-Division, and the remaining eight platoons are commanded by Lieutenants and Ensigns.⁵⁴⁷

The effect of this was that soldiers were frequently formed with men from other companies and more often than not were under the command of officers they did not know and who did not know them.

For some years officers had questioned the existence of two separate sets of arms drill, the Manual Exercise, which included all the drill involving the musket, and the Platoon Exercise, which was for use in the platoons, in action, on the battlefield.⁵⁴⁸

The question asked was why was there a need for two drills? This had the potential to confuse a soldier in battle, particularly as the Manual required the soldier to cast about the musket to his left side, whilst the platoon required him to load with the musket to his right. With the issue of the 1756 Regulations the Manual Exercise was

⁵⁴⁷ *A New Exercise*, 1757, p. 5.

⁵⁴⁸ For an example of such criticism see Douglass, *Scholae Martis*, f. 219 r.

restricted to those parts of the musket drill that were not part of the loading and firing drill. Loading and firing were now carried out solely according to the Platoon Exercise.

The new platoon exercise was not, however, without fault and one change was made between the exercise as first issued in April 1756 and as issued in 1758 in a second, 'entirely corrected and enlarged' edition. Initially the position for priming the musket required it to be held at chest height, the muzzle a little higher than the butt and resting in the crook of the left elbow and between the thumb and forefinger of the left hand, the forefinger resting on the feather spring of the lock.⁵⁴⁹ This had two obvious drawbacks, it was uncomfortable, with the elbow raised unnaturally high and supporting the weight of the musket, and the muskets of each rank were liable to get in the way of the rank in front. In the revised version the musket was held in the left hand at the point of balance with the muzzle raised above the head of the man in front.⁵⁵⁰

With the ranks standing two feet apart for loading there was no longer any need for the second and rear rank to close forward in order to lock up for firing. Instead the front rank man knelt, pushing his right foot backwards three feet. The second rank man stepped back a foot with his right foot, placing it just behind the right foot of the front rank man. This allowed him to fire over the head of the front rank man. The rear rank man stepped to the right with his right foot so that it was behind the left heel of his right hand man. This allowed him to aim his musket between the second rank

⁵⁴⁹ The feather spring is at the muzzle end of the musket lock and acts on the pan cover and frizzen, holding it either open or closed. *A New Exercise*, 1757. p. 7-8.

⁵⁵⁰ *New Manual Exercise*, 1758, p. 13.

man to his front and the one to his right.⁵⁵¹ The main consequence of these changes was that it became possible to form the men with the elbows just touching, reckoned as twenty-one inches to each file.⁵⁵² Prior to this the files had been half an arm's length apart, which is approximately a nine inch gap.⁵⁵³ The effect of this was to increase the density of the distribution of muskets in a battalion. The effect of the fire of a platoon of thirty six men was concentrated in seven yards rather than ten as previously. While this would not have resulted in more casualties amongst the enemy it would have concentrated them in smaller area.

John Houlding states that the 1756 regulations reduced the platoon exercise from sixty three to twenty four motions, making it easier to learn and increasing the rate of fire by at least one round every two minutes.⁵⁵⁴ Houlding does not say what the rate of fire was, and the effect of reducing the number of motions on the loading time was minimal. The loading time of a musket was certainly decreased by the elimination of the ranks opening and closing and the new priming position. But the number of motions that the loading process was divided into made no difference to the requirements of the process itself. This was something that Douglass commented on in the 1740s in relation to a new platoon exercise developed by Colonel Blakeney. He wrote: 'Lastly the author pretends shortening ye exercise by leaving out ye words of command...although ye words are left out yet ye number of motions are not decres'd.'⁵⁵⁵ In other words, it doesn't matter how the process of loading a musket is divided up, it is only by such things as priming from the cartridge instead of a flask,

⁵⁵¹ *A New Exercise*, 1757, p. 10.

⁵⁵² *A New Exercise*, 1757, p. 6.

⁵⁵³ Bland, *Military Discipline*, p. 10.

⁵⁵⁴ Houlding, *Fit for Service*, p. 199.

⁵⁵⁵ Douglass, *Scholae Martis*, f. 219 r.

going straight to the priming position from the present and by adopting the more robust steel ramrod or tap loading that the process can be speeded up.

Despite these regulations reiterating the 1748 firings there continued to be moves to change to alternate firing in the face of considerable high-ranking opposition in the shape of the Duke of Cumberland. As has already been discussed in connection with its use at Culloden, alternate fire could deliver the fire of a battalion very quickly.⁵⁵⁶

An article written in 1757, although apparently not published until 1759, offers a possible explanation for the objections to alternate fire. 'We have imbibed a notion that our safety depends upon reserving the greatest part of our fire, and therefore we use our men to fire by single platoons.'⁵⁵⁷ Another officer gave a similar explanation, 'The square toes of the army tells us that half the regiment ought to be constantly shoulder'd. I have often heard this maxim, but never heard a reason for it.'⁵⁵⁸ In a reiteration of this the Foot Exercise 1757 as found in *A System of Camp Discipline* includes, 'In the firings by grand Divisions the Officers must give a little more Time betwixt each Fire, that one half of the Battalion may always be loaded.'⁵⁵⁹ This would seem to chime with the arguments against alternate fire offered by Bland who thought its use left a battalion to open to attack.⁵⁶⁰

But just as much as alternate fire was objected to, so too there were complaints about the authorised methods of delivering fire. One officer wrote in *The London*

⁵⁵⁶ See above, pp. 167-68.

⁵⁵⁷ 'Observations relating to Military Exercise as now practised in the English Army', *Lloyd's Evening Post and British Chronicle* (London, 1759), March 28 – 30, p. 310, piece written in 1757.

⁵⁵⁸ Anon., *The Complete Militia-Man* (London, 1760) p. 38. Square toes is a reference to old fashioned footwear and thus, here, to the older officers of the army.

⁵⁵⁹ Anon, *A System of Camp Discipline.., to which is added General Kane's Campaigns of King William* (London, 1757, 2nd edition), p. 59.

⁵⁶⁰ See above, p. 167.

Magazine: 'But at present five or six different methods of firing in a battalion are constantly taught and practised. But, pray, why so many? Since they cannot all be good.'⁵⁶¹ Firing platoon by platoon was objected to on the grounds that it took far too long and left the men standing with muskets loaded waiting their turn. The same officer recorded how high he could count between a platoon finishing loading and its turn to fire coming round. Unfortunately he did not say how fast he counted other than to say it was 'with moderate quickness'. He claimed he had counted from up to 180 to 260, which assuming two counts to the second gives a time delay of from 90 seconds to 130 seconds, but even at three counts a second gives a time of at least 60 seconds. He went on to say 'The reason generally given for firing by these platoons is, that a constant fire should always be kept up.'⁵⁶²

If firing by individual platoons was too slow then firing by firings or sub-divisions was also criticised. Here the objections were based upon the difficulty of coordinating the fire of units that were separated from each other, some by the whole width of a battalion. This was thought to be particularly difficult when more than one battalion was firing at a time and even more difficult in battle.

In regard to firing by firings, I should think that it must also be impossible for the scattered divisions, in action, to hear their signals, whether they be given by drums, or voices; and, as the battalion is divided into three fires only, perhaps the fire could not be perpetual.⁵⁶³

This was something that Wolfe had stated when introducing alternate fire to the 20th.

As the alternate fire by platoons or divisions, or by companies, is the most simple, plain and easy, and used by the best disciplined troops in Europe, we are at all times to imitate them in that respect, making every platoon receive the word of command, to make ready and fire from the officer who commands

⁵⁶¹ 'An officer's observations on the present Methods of Firing, from his Letter to his Friend, lately Published', *London Magazine or Gentleman's monthly intelligencer*, 29, (London, December, 1760), p. 631.

⁵⁶² 'Observations on the present Methods of Firing', *London Magazine*, p. 631.

⁵⁶³ 'Observations on the present Methods of Firing', *London Magazine*, p. 632-33.

it; because in battle the fire of the artillery and infantry may render it difficult to use any general signals by beat of drum.⁵⁶⁴

The officer who questioned firing by platoons in *The London Magazine* also argued that perpetual fire was possible with sub-divisions and even grand-divisions, which was eight or four fire units, and which raised the question, why fire by individual platoons? To demonstrate that perpetual firing with four fire units was possible he gave the example of the 2nd Troop of Horse Grenadiers who had done just that.⁵⁶⁵ This was a particularly interesting example to use as this was a cavalry unit. At that time all cavalry units were required to be able to fight on foot if necessary.⁵⁶⁶ He also informed his readers that Marshal Saxe said a good soldier could fire four times a minute, or every fifteen seconds, and that the Prussians had eight platoons in a battalion. These, he informs us, were 'only one word of command behind that which it follows'.⁵⁶⁷ By this he means that if, as with British infantry, the words of command to fire a volley were 'Make Ready, Present, Fire' then the officer commanding the second platoon to fire would order 'Make Ready' as the first ordered 'Present'. This would have resulted in something like a two second delay between platoons firing, meaning that each platoon fired every sixteen seconds.

This officer made a case the case for a battalion's fire to be delivered in four firings. Another did the same, but adding that in a firing it was not absolutely necessary for the platoons to fire perfectly together.⁵⁶⁸ The view that a constant fire could be kept

⁵⁶⁴ Wolfe, *Instructions*, p. 35.

⁵⁶⁵ 'Observations on the present Methods of Firing', *London Magazine*, p. 631-632.

⁵⁶⁶ David Blackmore, *British Cavalry of the Mid-18th Century* (Nottingham, 2008), pp. 80-81.

⁵⁶⁷ 'Observations on the present Methods of Firing', *London Magazine*, p. 631.

⁵⁶⁸ Anon., Observations relating to Military Exercise as now practised in the English Army, *Lloyd's Evening Post and British Chronicle* (London, 1759), March 28 – 30, p.310, the piece had been written in 1757.

up using four fire units was challenged in an article commenting upon *Observations on Firing*.

He imagines, that four platoons are able to keep up a constant succession of firing; whereas he will find, upon experiment, that just double that number will come nearest the mark he aims at, viz. to keep up an uninterrupted succession of fire, and thus to discharge the greatest quantity of ball in the least time possible.

The author of this article went on to recommend to his readers *The Complete Militia-Man*, 'where he will find the best system of firing we remember to have seen'.⁵⁶⁹

The Complete Militia-Man was an extremely useful publication because it was written for civilians taking commissions in the militia and thus contained explanations that would not have been necessary for regular officers. The criticism of the authorised firings was repeated.

In my chapter of *the firings*, I have differed entirely from the practice of the army, because I was willing to recommend nothing to the Militia, but was essential and practicable upon real service.⁵⁷⁰

The anonymous army officer who wrote this was in agreement with the other two equally anonymous officers in stating that fire should be reserved to close range, 'Experience informs us that the fire of musketry at a distance does very little execution', but that once firing had started it could not be delivered too quickly. However, he maintained that it was necessary to have eight fire units.

It is scarce possible to reserve your fire too long, before you begin; but I am certain, that after you do begin, it is impossible to make your succession of fire too quick. Let me therefore advise the gentlemen of the Militia, if they ever

⁵⁶⁹ 'A letter from an officer to his friend', *The Monthly Review* (London, November, 1760), pp. 375-77.

⁵⁷⁰ Anon., *The Complete Militia-Man* (London, 1760), p. xi.

engage an enemy, not to fire by platoons, but by sub-divisions, or companies, provided they have eight companies in their battalion.⁵⁷¹

What is noticeable about this discussion in the pages of various English publications is that it is entirely concerned with the best way to deliver a battalion's fire. There is no discussion anywhere of the relative benefits of firepower as against cold steel, or column versus line. The debates that took place in Europe appear to have completely passed by the British officer corps. Although it is not explicitly stated anywhere, it is tempting to consider that they were perfectly content with their tactical doctrine and it was only improving the execution of that which was of interest to them.

Some officers were so convinced of the difficulties of the official firings and of the superiority of alternate fire that they introduced it to the troops under their command. This is what occurred in 1757 on the Isle of Wight where General Mordaunt was preparing a force for an amphibious assault on France. Two of the battalions under his command were the 20th, under Wolfe, and the 33rd, under the Duke of Richmond. Perhaps under the influence of those two officers, Mordaunt effectively tore up the regulations, as the Duke of Richmond wrote in a letter to his brother.

General Mordaunt has done a thing in his army, which if it is followed by the rest the whole nation will be obliged to him for it. He has dared to follow common sense and to put into execution what every body has long since thought right. He has broke through all the absurd regulations that General Napier has been puzzling the army with since he has been Adjutant General. He has abolished the manual exercise both old and new, and draws up all the regiments as Kingsley's [20th] used to do, by companies with their own officers.

⁵⁷¹ *The Complete Militia-Man*, p. 38.

This is truly great and you have no idea how much it has already improved the other regiments. This is against all order, and some persons are amazed that Sir John Mordaunt will undertake it.⁵⁷²

In doing this Mordaunt was risking the wrath of the Duke of Cumberland, who was campaigning in Germany, albeit with an army that contained no British troops. Not surprisingly Cumberland heard about Mordaunt's actions and wrote to the Secretary at War in no uncertain terms, insisting that the regulations should be adhered to.⁵⁷³ However, Cumberland had just been badly beaten by the French at the Battle of Hastenbeck and at the Convention of Kloster Zeven was forced to accept humiliating terms by which his army was disbanded.⁵⁷⁴ As a result Cumberland resigned all his positions, leaving the way clear for the proponents of alternate fire.

Using Wolfe's *Instructions*, Richmond's letter to his brother, which states categorically that they were drawing up 'all the regiments as Kingsley's [20th] used to do', and *The Complete Militia-Man* it is possible to examine precisely how alternate fire was organised and executed and to analyse its effectiveness. In keeping with the Prussian practice the core of alternate fire was eight fire units. In order to simplify the organisation of a battalion these were to be eight of a battalion's ten companies. Of the other two companies one was the Grenadier Company. Previously this had been divided into two platoons, one on each flank of the battalion. With the company now the basic fire unit it was no longer possible to divide the Grenadiers in that manner. Instead they were posted as a complete company on the right of the battalion whilst the other, tenth company was posted on the left and referred to as a piquet. This

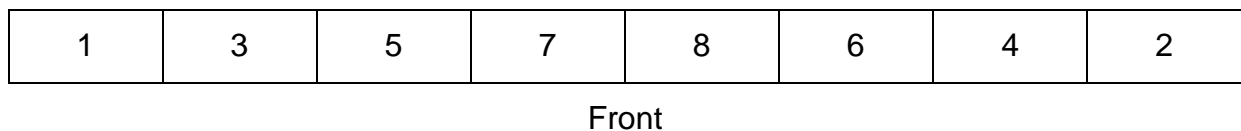
⁵⁷² The Duke of Richmond to Lord George Lennox, 9 September, 1757, in HMC, *Bathurst Manuscripts*, p. 681.

⁵⁷³ Duke of Cumberland to Lord Barrington, 28 August, 1757, in Pargellis, *Military Affairs in North America, 1748-1765*, p. 398, quoted above, p. 185.

⁵⁷⁴ Rex Whitworth, *William Augustus, Duke of Cumberland, A Life* (Barnsley, 1992), pp194-99.

term applied to any detachment of soldiers, as Richmond explained in his letter; ‘The whole comp[any] of Grenadiers on the right and a detached company or picquet on the left.’ In addition to a company acting as a single fire unit it was also divided into two platoons that could also be used as fire units if necessary. One further detail, found in both Wolfe’s *Instructions* and Richmond’s letter, is that each company retained its own officers with it instead of them being distributed around the battalion according to seniority.⁵⁷⁵

Figure 7.1: The order of firing of eight companies using alternate fire



According to *The Complete Militia-Man* the first and second companies to fire, being at opposite ends of a battalion, were to ‘make ready’ when the battalion commander instructed the battalion to ‘Take care to fire by sub-division’. When the order was given to commence firing the officer commanding the first company, on the right of the battalion, then gave the orders ‘present, followed by ‘fire’. The next company to the left was to fire third, after the second company to fire, which was on the other flank. The commander of this third company gave the order ‘make ready’ as soon as the first company fired. On hearing that first company fire the commander of the second company to fire also gave the orders ‘present,’ ‘fire’, at which point the company to its right, which was to be the fourth to fire, would ‘make ready’.

Meanwhile, back on the other flank of the battalion, the officer commanding the third

⁵⁷⁵ Wolfe, *Instructions*, p. 45 and The Duke of Richmond to Lord George Lennox, 9 September, 1757, *Bathurst Manuscripts*, p. 681.

company to fire, hearing the second fire, gave the orders 'present' and 'fire', which was followed by the fourth company firing.⁵⁷⁶ As the commander of the third company to fire took his timing for the order 'make ready' from the first, which was next to him, and had only to listen for the second company firing, this largely dealt with the difficulty of the separation of the successive companies firing.

Rather than having the grenadier company on one flank and a piquet company on the other as practised in the Regular army, *The Complete Militia-Man* had the grenadier company divided into two platoons, one on each flank. Of these, the right hand platoon was to 'make ready' after the fourth company fired and to fire after the fifth, followed by the grenadier platoon on the left flank. The remaining four companies followed in a like manner.⁵⁷⁷ It would seem likely, however, that the firing sequence used by the regular battalions did not include the grenadier and piquet companies. According to Richmond the battalions formed with,

The whole comp[any] of Grenadiers on the right and a detached company or picquet on the left. The remaining eight companies form the battalions and have all their own officers with them, and practise no other firing but by companies from right and left.⁵⁷⁸

Wolfe's Instructions also suggest that the grenadier and picquet companies operated semi-independently of the main body of the battalion, covering and protecting the flanks or pursuing a beaten enemy.⁵⁷⁹

The rate of fire or of reloading is difficult to determine, there is no record of any officer making use of a watch to time the firings. However, taking the various

⁵⁷⁶ *The Complete Militia-Man*, p. 42.

⁵⁷⁷ *The Complete Militia-Man*, p. 42.

⁵⁷⁸ The Duke of Richmond to Lord George Lennox, 9 September, 1757, *Bathurst Manuscripts*, p. 681

⁵⁷⁹ Wolf, *Instructions*, pp. 48-50.

comments suggesting that four rounds a minute was possible, that eight fire units could keep up a continual fire and considering the description of the giving of orders for alternate fire in *The Complete Militia-Man*, some estimation is possible.⁵⁸⁰ Four rounds a minute suggests a reloading time of fifteen seconds, but a unit had to be reloaded before an officer could give the first order of 'make ready', followed by 'present' and 'fire'. Allowing time for the front rank to kneel this sequence could take approximately five seconds, reducing the loading time to ten seconds, which would seem extremely difficult to achieve.

If the firing sequence in eight fire units is considered, the first company to fire was expected to make ready again after the seventh company had fired so that it could fire again after the eighth. This gave it the six intervals between it firing and the subsequent six companies firing in which to reload. Each interval was long enough for a company commander to give the orders 'present' and 'fire' and for his company to do just that. It was also long enough for a company to make ready, with the front rank kneeling, the second and rear ranks taking their proper position and the muskets being cocked. If this interval was three seconds, that gave each company eighteen seconds from firing before it had to be reloaded again and ready to 'make ready'.

These figures are, of course, approximations, but they do suggest strongly that a battalion was quite capable of delivering all of its fire approximately every twenty seconds. Allowing for a battalion on campaign being a little under its official

⁵⁸⁰ Campbell Dalrymple, *A Military Essay* (London, 1761), p. 51, also says that good infantry could fire four times a minute.

establishment of seventy men to a company, perhaps sixty men, then eight companies would discharge 480 rounds. Standing in three ranks with a frontage of twenty-one inches a man and with a three foot interval between companies they had a total frontage of approximately one hundred yards. If the rate of hits already seen at Culloden and Fontenoy is allowed, then a battalion of British infantry employing eight companies firing alternately, could, at the preferred range of thirty yards, inflict between 100 to 120 casualties on an enemy every twenty seconds. That is one casualty for every yard of frontage every twenty seconds.

Arguing against the possibility of this sort of effectiveness a Dutch officer wrote,

It is observed that, at the battle of Fontenoy, the French had about six thousand killed and wounded. Now, on the side of the allies...there were but twenty thousand combatants. It is known, these fired away all their cartridges, to the number, perhaps, of thirty-six each man: but we will suppose each man fired no more than twenty: here were four hundred thousand shot discharged. And if, at the same time, we suppose, that only five hundred men suffered from the artillery, it is plain, here were seventy-three shot to one person killed or wounded. If we consider, besides, how many might suffer from the bayonet, the disproportion will also be considerably increased.⁵⁸¹

This argument, however, was effectively dealt with by the author of *The Complete Militia-Man*.

First, let me assure you that the fire of a regiment, unless it be very near, is far from being so terrible as those who are not experienced are apt to imagine. One would think that almost every ball must do execution; but this is so far from being the case, that, in a general engagement, not one ball in a hundred does any mischief, till the armies come within twenty or thirty paces of each other. For this reason, if you have any desire to triumph over your enemies, or the least regard for your own safety, you will be very cautious not to throw away your fire.⁵⁸²

The inaccuracy of musket fire at any sort of distance was well known and was highlighted by Lafausille as contributing to the defeat of the French during the War of

⁵⁸¹ Knoch, 'The insufficiency of fire-arms for attack or defence, demonstrated from facts, &c', *The Edinburgh Magazine*, vol. 3 (Nov 1759), pp. 583-85.

⁵⁸² *The Complete Militia-Man*, p. 75.

Austrian Succession.⁵⁸³ The British infantry was clearly still adhering to the doctrine of close range fire delivered with efficiency and accuracy. Whilst other nations might have been debating the competing merits of firepower and cold steel, British infantry was still balancing firepower with the use of the bayonet. Wolfe's comments have already been noted above.⁵⁸⁴ The *Complete Militia-Man* contained directions to march up close to the enemy, in this case specifically naming the French, fire and then 'charge your bayonets, march briskly up, and rush, like lions, into the broken ranks of the enemy'.⁵⁸⁵

In connection with the bayonet it has been suggested that Wolfe was responsible for the introduction to the British Army of a new form of bayonet drill.⁵⁸⁶ Rather than held breast high as the pike had been, this new method saw the bayonet held much more comfortably at waist height. Unlike alternate fire there was no mention of this in direct connection with Wolfe, or Richmond, in any contemporary writing. However, it did make an appearance in several of the manuals that were written specifically for militia units. One of these was written for the Norfolk Militia and in his introduction its author acknowledged the assistance received from officers of Wolfe's and Richmond's regiments.⁵⁸⁷ It was not until the 1764 regulations were issued that this bayonet drill became authorised for use by the regular battalion, although it would seem unlikely that something like this was in use by the militia, but not the regulars.

⁵⁸³ Cumberland Papers, Orderly Book Extracts, 2/2 f. 4r, see above, p.156-57.

⁵⁸⁴ Wolfe, *Instructions*, p. 49, see above, p. 204.

⁵⁸⁵ *The Complete Militia-Man*, p. 74.

⁵⁸⁶ Reid, *Wolfe*, p. 115.

⁵⁸⁷ William Windham, *A Plan of Discipline for the Use of The Norfolk Militia* (London, 1759), np (advertisement) and p. 11.

On the question of dealing with cavalry the duke of Richmond's letter tells us that amongst other things General Mordaunt abandoned 'such absurdities as squares etc.'⁵⁸⁸ Wolfe's Instructions are silent on the matter. The complete Militia-Man repeats advice that had been given since Mackay's rules.⁵⁸⁹

If ever you are attack'd by cavalry, your safety, as in the former case, depends entirely on reserving your fire; for if you should foolishly throw it away whilst they are at a distance, they will instantly put spurs to horses, and drive in among you: but if, on the contrary, you do not fire at all, you may be certain they will never come within fifty yards of you with their whole body.⁵⁹⁰

In 1755, at the same time as the British Army had been striving to improve its platoon exercise, the French Army also further developed its own version of platoon firing. A French battalion was to form in three ranks rather than four and its twelve companies were divided into six platoons that fired alternately from the centre to the flanks. There was to be a two second interval between each platoon firing. The French, however, saw platoon firing as an essentially defensive tactic, continuing to prefer to rely on shock and cold steel in the offensive.⁵⁹¹ Consequently they did not develop the aggressive combination of firepower and the bayonet in the attack used by British infantry. There was also an apparent problem with the quality of French musketry. A British officer, George Durant, wrote that the French were bad marksmen because they believed a musket ball in flight falls. As a consequence they had a tendency to aim high. Whilst this is true with regard to the laws of gravity, it was, in fact, necessary to aim low with a musket and the closer the target the lower it was necessary to aim. This was because a musket kicked up as it was fired,

⁵⁸⁸ The Duke of Richmond to Lord George Lennox, 9 September, 1757, *Bathurst Manuscripts*, p. 681.

⁵⁸⁹ Mackay, *Rules of War*, Article X, see above, p. 96.

⁵⁹⁰ *The Complete Militia-Man*, p. 84.

⁵⁹¹ Nosworthy, *Anatomy of Victory*, pp. 276-277.

throwing the shot high.⁵⁹² Durant went on to write that consequently few British soldiers were hit below the chest while muskets being carried at the shoulder were hit above soldiers' heads.⁵⁹³ In Germany in August 1761 Corporal Todd of the 30th described an attack against French infantry who 'fired a whole Volley upon us...but scarce Kill'd aman, their shott flying over us'. He continued to describe how, in their normal manner, the British battalion continued to advance until within pistol shot before firing, which caused the immediate retreat of the French.⁵⁹⁴

In Germany in 1759 British infantry was ordered by Lord George Sackville to form according to the 1749 firings, in sixteen platoons, exclusive of Grenadiers. At first sight this appeared to be a retrograde step, but the orders added further details. Each company was to be a sub-division, or two platoons, with two companies to a grand-division. This organisation is not possible with an establishment of nine hat companies, unless the extra company was deployed as a picquet. That these orders established, as at least local regulations, the organisation and firings practised under General Mordaunt is clear from the part dealing with firing.

It is recommended to the commanding officers to practice 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 he shall not see for the future one regiment practising differently from another, and of course producing confusion in the service.⁵⁹⁵

It was with this organisation that British infantry entered the Seven Years War in Europe.

⁵⁹² Christopher Duffy, *The Military Experience in the Age of Reason* (Ware, 1998, paperback edition) pp. 207-209.

⁵⁹³ George Durant, 'Journal of the Expedition to Martinique and Guadeloupe, October 1758 – May 1759', in Alan J Guy, R N W Thomas and Gerard J deGroot (eds.), *Military Miscellany I* (Stroud, 1997), p. 51.

⁵⁹⁴ Andrew Cormack and Alan Jones (eds.), *The Journal of Corporal Todd, 1745-1762* (Stroud, 2001), p. 182.

⁵⁹⁵ HMC, *Manuscripts of M L Clements* (London, 1913), pp. 560-61.

Leaving aside the various British amphibious raids on the French coast, there was, initially, limited participation in the Seven Years War in Europe by British infantry. Their first engagement was at Minden where the six British battalions that won the day were the only British infantry present. At Corbach just four battalions were engaged whilst at Warburg it was primarily the British cavalry that was engaged. At Kloster Kamp there were eight battalions with two grenadier battalions formed by combining the grenadier companies of those battalions. At both Vellinghausen and Wilhelmsthal there were seventeen British battalions, but some sixty or more other allied battalions. Despite this numerical inferiority it is arguable that in all their engagements British infantry punched above their weight.

At the Battle of Minden on 1 August 1759 the six British battalions present performed in such a manner that their feats that day are still annually celebrated by their descendant units. An Allied Army under Prince Frederick of Brunswick had lured a French army into battle on unfavourable ground. Whilst the battle was still in its early stages the British infantry, in the centre of Frederick's army, misunderstood their orders and immediately set off, supported by three Hanoverian battalions, marching directly towards the centre of the French army. The 12th, 37th and 23rd regiments formed the first line, followed by the 25th, 51st and 20th with the Hanoverians on their left flank. In an unusual deployment they were faced by sixty-three squadrons of cavalry formed in three lines in the centre of the French army.⁵⁹⁶ A detailed account of what followed was given by a British officer in the 12th which, as the front right battalion, saw the hardest of the fighting.

⁵⁹⁶ [http://www.kronoskaf.com/syw/index.php?title=1759-08-01 - Battle of Minden](http://www.kronoskaf.com/syw/index.php?title=1759-08-01_-_Battle_of_Minden), [Accessed 3 March 2012]; http://vial.jean.free.fr/new_npi/revues_npi/4_1998/npi_498/4_odbf_010859.htm [Accessed 3 March, 2012].

When we got within about 100 yards of the Enemy a large Body of French Cavalry galloped boldly down upon us; these our Men by reserving their fire until they came within 30 yards immediately ruined.⁵⁹⁷

Yet again the infantry held their fire until the enemy were within the preferred range of thirty yards. It would be reasonable to assume that under such circumstances the battalions fired all their companies together, something that appears to have been practiced even if it does not appear in the regulations. Corporal Todd reported practicing all the usual forms of firing and 'vollies'.⁵⁹⁸ If not a reference to whole battalion firings it is difficult to know what else this might refer to.

The British battalions were then charged by fresh cavalry, the Gens d'Armes, which 'we almost immediately dispersed without receiving hardly any mischief from the harmless Creatures'. The next French attack was made by seventeen infantry battalions, which the 12th and 37th wheeled to face. There followed a sustained firefight for about ten minutes before the French were driven off.⁵⁹⁹ It is highly improbable that the British infantry fired without a break for ten minutes. At three or four rounds a minute that would have used up most, if not all the ammunition carried by the infantry, usually twenty-four rounds a man. It is more likely that they fought a quick succession of firefights as enemy battalions were beaten and replaced by others. The next French attack was carried out by battalions of Grenadiers and the description sheds light on the French infantry's apprehension about getting into a firefight with British infantry.

The next who made their appearance were some Regts of the Grenadiers of France, as fine and terrible looking Fellows as I ever saw. They stood us a tug; not with standing we beat them off to a distance, where they galded us

⁵⁹⁷ NAM 7510/92, A copy of a letter written by an officer of the 12th Foot to his mother on the 9th August 1759.

⁵⁹⁸ *The Journal of Corporal Todd*, p. 63.

⁵⁹⁹ NAM 7510/92.

much they having rifled barrels, and our Musquets would not reach them. To remedy this we advanced, they took the hint, and ran away.⁶⁰⁰

A final attack, the officer of the 12th said by infantry, others cavalry and perhaps some confusion is understandable in the light of what had passed, partially broke the front three battalions, but was beaten by the three battalions in the second line. By the end of the battle the 12th had suffered 302 rank and file killed and wounded out of 480 and 18 officers killed and wounded out of 27. 'With this remnant we returned again the charge, but to our unspeakable joy no opponents could be found'.⁶⁰¹

There is insufficient information to analyse this action in terms of rounds fired, rates of fire and casualties caused. There is no doubt, however, that it represented an unheard of achievement by infantry. The French general, Contades, summarised what had had happened and its implications for the French Army.

As to the cannon, those of our enemy fired quicker, and did more execution than ours. Our musquetry, indeed, fired faster and oftener, 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 giving any more; and I cannot help mentioning, what if I had not seen it, I should have thought incredible, that one single column of infantry penetrated and broke through three lines of cavalry. This column consisted principally of the English regiments, whose intrepid behaviour in this battle, it will be prudent to conceal from the troops designed to invade Great Britain from France, less they should be intimidated by it.⁶⁰²

This is a clear recognition of the battlefield doctrine of British infantry, an admission of its capabilities and a confession that the French could not match it.

⁶⁰⁰ NAM 7510/92.

⁶⁰¹ NAM 7510/92.

⁶⁰² 'A Letter from Mons. De Contades to Marchal Belleisle, in Answer to his published in the London Gazette of the 18th of August', *London Chronicle (Semi Annual)* (London), September 11, 1759 – September 13, 1759, issue 423.

The battles of Corbach, Emsdorf and Warburg in 1760 are best known for the successful exploits of the British cavalry, which more than made up for Minden where they had sat inactive while the French army fled the field. Their commander, Lord Sackville was subsequently court-martialled and cashiered. Later that year, on 16 October 1760, at Klosterkamp an attempt to launch a surprise attack on the French ultimately failed, but only after the Allied infantry involved had expended all their ammunition. In this engagement the fire of the British infantry was said to have been 'so rapid and deadly that three French brigades were almost wiped out of existence'.⁶⁰³ The engagement lasted from before dawn until noon. One small hint as to how the British infantry at least might have been able to sustain a fight for so long when the standard issue of ammunition was twenty four rounds comes from the diary of Corporal Todd. Prior to taking the field in 1761 he recorded how, on 1 June, after going through all the 'firing Motions' and having all the arms and ammunition checked it was ordered that more cartridges should be made up so that every man would have sixty rounds.⁶⁰⁴ On 9 June it was further ordered that the battalions should have 'plenty of Ammunition ready made up in the Tummerils [tumbrils]'.⁶⁰⁵ These were in addition to the sixty carried by each man, as in August Todd recorded thirty being taken from each man, 'they having carried with them 60 as before Order'd'.⁶⁰⁶ Whether carrying sixty rounds had been the case at Klosterkamp or was a consequence of it is unclear.

⁶⁰³ Fortescue, *History of the Army*, vol. ii, p.517.

⁶⁰⁴ *The Journal of Corporal Todd*, p. 141.

⁶⁰⁵ *The Journal of Corporal Todd*, p. 143.

⁶⁰⁶ *The Journal of Corporal Todd*, p. 177.

On the evening of 15 July 1761 Corporal Todd and his battalion were engaged in the opening round of the battle of Vellinghausen. The French attacked the Marquis of Granby's British Corps and Todd described how the eight British battalions 'performed wonders & Maintain'd their ground against four times their Number'.⁶⁰⁷ No doubt their sixty rounds a man helped. The French attack on the Allied army under Ferdinand the following day has been described as 'one of the feeblest ever fought by the French army'.⁶⁰⁸ Todd, however, has left some interesting detail about the fight seen from his level. After the first evening's fighting he recorded that they were ordered to check their muskets and to ensure every man had a good flint and was properly loaded. Much of the fighting the following day morning was in woods and amongst thick bushes where they had frequent recourse to their bayonets.⁶⁰⁹

The Seven Years War came to an end in 1763 and in 1764 a new set of regulations were issued for the British Army. There were some minor changes to the loading and individual firing in the platoon exercise. The use of the rammer was further quickened as it was drawn from the stock in two motions, turned and put into the barrel without first being shortened against the body. After ramming it was similarly just turned and replaced in the stock without shortening.⁶¹⁰ It would appear that having the men in each rank standing so close that they touched the men beside them left too little room for ease of loading. The files were now to be four inches apart while the distance between the ranks for firing remained at two feet.⁶¹¹ On the order 'make ready' the second rank men stepped slightly to their right, only moving

⁶⁰⁷ *The Journal of Corporal Todd*, p. 165.

⁶⁰⁸ Fortescue, *History of the Army*, vol. ii, p.530.

⁶⁰⁹ *The Journal of Corporal Todd*, pp. 165-166.

⁶¹⁰ *A New Manual and Platoon Exercise, with an Explanation* (Dublin, 1764), pp. 5-6.

⁶¹¹ Anon., *The Manual Exercise as Ordered by His Majesty in 1764 Together with Plans and Explanations of the method generally practis'd at Reviews and Field Days* (Boston, 1774), pp.15-16.

their right foot. After firing they brought the left foot towards the right for reloading. The rear rank took a larger step to the right and followed it with the left foot. They also stayed stepped to the right to reload, but after reloading both ranks stepped back to the left behind the front rank men.⁶¹² While this meant that each file had a frontage of twenty five inches instead of twenty one it probably made loading easier and thus slightly quicker. This was still closer together than had been the case during the War of Austrian Succession.

With regard to the instructions for delivering the fire of a battalion the use of firing by individual platoons and by firings had disappeared. Firing was now limited to alternate fire by sub-divisions, exactly as described by Wolfe, Richmond and in *The Complete Militia-Man*, or firing by grand-divisions. The only difference was that the number of hat companies was reduced to eight after the war and the grenadier company was once again divided into two platoons, one on each flank.⁶¹³

During the Seven Years War in Europe the infantry of the British Army had continued to demonstrate their effectiveness and to seek to improve their performance. This was not done, however, following any great debate about how battles should be fought, whether cold steel was superior to firepower, or column to line, the doctrinal debates in Europe seem to have passed by almost unremarked. Instead there was a continuing adherence to the doctrine of close range fire followed by the prompt and effective use of the bayonet. In doing so they changed the method of delivery back to something like it had been at the start of the War of the Spanish Succession, which was alternate fire by companies. Bland's objection to this had been that it left parts of

⁶¹² *A New Manual and Platoon Exercise, with an Explanation* (Dublin, 1764), pp. 15-19.

⁶¹³ Houlding, *Fit for Service*, p. 418.

a battalion unloaded and thus too exposed to attack.⁶¹⁴ The introduction of firings had meant that a part of a battalion's fire was always available along the whole front. Changes in drill and the adoption of other measures, such as the steel rammer, had the effect of reducing the loading time to the point where the dangers highlighted by Bland were neutralised. This allowed a return to the much simpler alternate fire method, which was far easier to control and less likely to break down in confusion. This in turn increased the effectiveness of that fire.

⁶¹⁴ See above, p. 167.

8: The French and Indian Wars

Whilst a part of the British army was campaigning in Europe a significant part was experiencing the less familiar expanses of North America. The nature of the environment required the army to adapt to campaigning over huge distances through wilderness landscapes and presented many new challenges to an army more accustomed to campaigning in Europe.⁶¹⁵ It was also faced with fighting against not only French regulars, but a very different enemy in the form of Indians and French-Canadian irregulars. However, despite the obviously very different nature of warfare, the bulk of the recent scholarly history written about this war is concerned with the narrative of events rather than any analysis of those differences and their consequences. An example of this is Anderson's *Crucible of War*.⁶¹⁶

Historians of the Seven Years War in North America, or the French and Indian Wars as it usually referred to in North America, have tended to look most frequently at the campaign in 1759 under Major General James Wolfe. This is not surprising as it was the decisive campaign that led to not only the defeat of the French and the capture of Quebec, but to the expulsion of France from Canada and the establishment of British control there. In addition to Wolfe's strategic achievements Stuart Reid has also sought to analyse his wider contribution to the British Army and concludes:

In the longer term it was Wolfe's volley and bayonet tactics, first described in December 1755, which formed the cornerstone of British infantry tactics in the Peninsular War and at Waterloo. ...his influence on the development of the

⁶¹⁵ The nature of the challenges presented to the British Army by the North American environment are discussed in full in Stephen Brumwell, *Redcoats, The British Soldier and War in the Americas, 1755 – 1763* (Cambridge, 2002).

⁶¹⁶ Fred Anderson, *Crucible of War, The Seven Years War and the Fate of Empire in British North America, 1754-1766* (Toronto and London, 2000).

British Army, and in particular on its infantry tactics, was perhaps his real legacy.⁶¹⁷

This assessment of Wolfe has been reiterated most recently by Saul David:

He left, moreover, an important legacy: the simple but effective battle tactic – a close quarter volley, followed by a bayonet charge – that British infantrymen would use to sweep all (or almost all) before them for much of the next hundred years.⁶¹⁸

Both writers are referring to Wolfe's influence on conventional warfare as represented by the Battle of Quebec, where, according to Fortescue, the British infantry delivered 'the most perfect volley ever fired on a battlefield'.⁶¹⁹ Wolfe's part in the development of tactics in the European theatre has already been discussed, but the Quebec campaign was his first independent command where he could influence tactics free of outside interference or objection.

By comparison scant attention has been paid to the demands and challenges of the irregular warfare that had to be faced. The campaigns in North America saw the establishment, albeit temporarily, of the first light infantry units in the British Army. These were raised specifically to counter the threat posed by the Indian allies of the French and their own French-Canadian irregulars. Perhaps because their contribution is not seen as decisive, or perhaps because their existence was temporary, their tactics and methods have been little studied. Fuller's *British Light Infantry in the Eighteenth Century* is dated and demonstrates a limited availability of material.⁶²⁰ Gates' *The British Light Infantry Arm* touches on the subject in his first

⁶¹⁷ Reid, *Wolfe*, p. 200.

⁶¹⁸ Saul David, *All the King's Men, The British Soldier from the Restoration to Waterloo* (London, 2012), p. 188.

⁶¹⁹ The Hon J W Fortescue, *A History of the British Army*, vol. ii (London, 1899), p. 381.

⁶²⁰ Colonel J F C Fuller, *British Light Infantry in the Eighteenth Century* (London, 1925).

chapter, but the French and Indian War is outside the main scope of his work.⁶²¹

More recently there has been a useful publication by Osprey, but the limited size of their publications means that it can only serve as an introduction to the subject.⁶²²

The most comprehensive, recent treatment of the development of light infantry and Indian fighting is in Brumwell's *Redcoat*. He deals with all aspects of the war in North America and addresses the nature of irregular warfare and the tactical evolution of the redcoats.⁶²³ His account of the development of British light infantry and its experiences is thorough, but in keeping with most military historians he neglects the procedures by which this form of warfare was conducted, making it difficult to identify any underlying tactical doctrine. He writes:

The mixture of regular and irregular warfare which characterised these campaigns demanded diverse combat skills; the resulting fusion of Old and New World techniques created troops capable of fighting in both the conventional fashion of Flanders and in a more flexible manner that owed little to the traditions of Dettingen and Fontenoy.⁶²⁴

What he does not do is give any description of those combat skills and techniques or the doctrine underpinning them.

Brumwell has also claimed, the "American Army" acquired an ethos and tactical doctrine that set it apart from other British and European armies'.⁶²⁵ This chapter will examine the changes in the tactics and the processes of combat that occurred in North America and whether or not a combat doctrine did develop that was different from what had developed before in Europe, particularly where irregular warfare was

⁶²¹ David Gates, *The British Light Infantry Arm, c. 1790-1815* (London, 1987).

⁶²² Ian M McCulloch and Tim J Todish, *British Light Infantryman of the Seven Years' War, North America, 1757 – 63* (Oxford, 2004).

⁶²³ Brumwell, *Redcoats*, chapters 6 and 7.

⁶²⁴ Brumwell, *Redcoats*, p.193.

⁶²⁵ Brumwell, *Redcoats*, p. 6.

concerned. This will include an examination of Wolfe's contribution to conventional warfare in the new theatre.

It was clearly understood that the nature of warfare against Indians was different from anything experienced in Europe or even the highlands of Scotland. What would seem not to have been appreciated was just how different it was. Writing after the war, Colonel, later Brigadier, Henry Bouquet summarised the tactics of the Indians.

The first, that their general maxim is to surround their enemy.

The second, that they fight scattered, and never in a compact body.

The third, that they never stand their ground when attacked, but immediately give way, to return to the charge.⁶²⁶

This type of warfare was far removed from Europe where solid lines of infantry three deep and manoeuvring in an open landscape could fire shattering volleys at ranges of thirty yards.

Just how different this was became apparent when Major General Braddock's expedition against Fort DuQuesne was thoroughly defeated on 9 July, 1755 at the Battle of Monongahela. Braddock was aware that the army's usual tactics would need to change in order to combat the Indian threat and he took steps to do that. In March he had issued instructions on how the battalions were to conduct their firing. One company was nominated as a second grenadier company and was to be posted on the left of the battalion while the grenadier company took the right. The eight remaining companies were retained intact and either formed single fire units or were divided into two platoons. When firing, the right hand of the eight companies fired

⁶²⁶ 'Reflections on the War with the Savages of North America' in William Smith, *An Historical Account of the Expedition against the Ohio Indians in the Year MDCCLXIV under the command of Henry Bouquet Esq.* (London, 1766), pp. 45-46. The author of these reflections is identified as Bouquet by Brumwell, *Redcoats*, p. 198, n. 24.

first, followed by the left hand company, and so on, alternating right and left towards the centre. The two grenadier companies fired last, but not until the first companies to fire were loaded again. The firing was to be 'as fast as possible'. Orders were to be given by the officer commanding a company.⁶²⁷ This method of delivering fire was nothing more or less than the alternate fire system that had been introduced by Wolfe to his regiment just two months earlier and is here in use some three years before Mordaunt introduced it to his command on the Isle of Wight.

On the march and in order to secure the numerous wagons from attack by Indians the main body of the infantry marched on each side of the wagons, company by company and in two files. In case of attack the infantry were to simply face outwards forming a two deep line on each side of the road. An advance guard preceded the main body. A few miles short of Fort DuQuesne the advance guard was engaged by a force of Indians and French infantry.

The French...threw themselves behind trees as soon as they saw the English & began to fire their muskets. The Indians...took up their positions at the base of each tree with their customary shrieks.⁶²⁸

After giving an initial platoon volley the officer commanding the advance guard,

observing their Confusion and being apprehensive of a second Attack of the same kind, immediately ordered the Men to draw back, and posted them singly behind Trees, in the Indian Manner; where probably they would not only have maintained themselves, but might have done execution against the Enemy, had not the General, who came up from the Rear upon the first Fire, upbraided them for Cowards, and with his Sword drawn forced them in a Manner to return to their Ranks.⁶²⁹

⁶²⁷ The Journal of Robert Orme, Lieutenant, Orders given at Alexandria 27 March 1755, in Winthrop Sargent (ed.), *The History of an Expedition against Fort DuQuesne in 1755* (Philadelphia, 1856), p.293; Halkett's Orderly Book, Orders 27 March 1755, in C Hamilton (ed.), *Braddock's Defeat* (Norman, Oklahoma, 1959).

⁶²⁸ Pierre Pouchot, Brian Leigh Dunnigan (ed.), Michael Cardy (trans.), *Memoirs on the late War in North America between France and England* (Youngstown, 1994), p. 82.

⁶²⁹ The Public Advertiser, November 3, 1755, in N Darnell Davis, 'British Newspaper Accounts of Braddock's Defeat' in *The Pennsylvania Magazine of History and Biography*, October 1899.

The consequence of this was that rather than holding their ground until the main body could be organised to meet the attack, the advance guard and their supports were driven back onto the main body, causing considerable confusion. The Indians then encircled the whole British column and continuously fired from cover at the British infantry standing in the open in rank and file.

They having always a large marke to shoute at and we having only to shoute at them behind trees or laid on their Bellies. We was drawn up in large Bodies together, a ready mark. They need not have taken sight at us for they Always had a large Mark, but if we saw of them five or six at one time [it] was a great sight and they Either on their Bellies or Behind trees or Running from one tree to another almost by the ground.⁶³⁰

Some attempts were made to close with the Indians with the bayonet, but these came to nothing as the Indians shot down the officers and avoided any close contact. Some of the American provincial troops took cover behind trees to return the Indian's fire, but many of these were shot from behind by the wild volleys that came from the British infantry whenever they caught a glimpse of a target.⁶³¹ One British soldier claimed that it was these Americans who caused what casualties were inflicted on the enemy.⁶³²

Remarkably the British infantry held their ground for about three hours, only finally breaking when they ran out of ammunition.⁶³³ According to a contemporary newspaper report the soldiers told their officers that it was pointless shooting at trees and bushes, but that they would fight their enemy if they could see him.⁶³⁴ The French and Indians had also made a point of picking off the officers, which

⁶³⁰ The Journal of Captain Robert Cholmley's Batman, in C Hamilton (ed.), *Braddock's Defeat* (Norman, Oklahoma, 1959) p.28.

⁶³¹ The Journal of a British Officer, in C Hamilton (ed.), *Braddock's Defeat* (Norman, Oklahoma, 1959) p.50.

⁶³² The Journal of Captain Robert Cholmley's Batman, p.28.

⁶³³ The Journal of Robert Orme, p. 356.

⁶³⁴ London Evening Post, August 26 to 28, 1755, in Davis, 'Newspaper Accounts'.

contributed to the lack of fire control and the general state of confusion and, ultimately, panic.⁶³⁵ As the French themselves reported:

The Indian mode of fighting is entirely different from that of us Europeans, which is good for nothing in this country. The enemy formed themselves into battle array, presented a front to men concealed behind trees, who at each shot brought down one or two, and thus defeated almost the whole of the English.⁶³⁶

In the aftermath of this defeat one British officer complained that Braddock had given orders to fire by platoon, which was inappropriate for the situation they had found themselves in.⁶³⁷ Braddock was mortally wounded in the battle and unable to defend himself. However, this lack of control of the infantry's fire, along with an ignorance of the nature of the enemy, was also identified by the French as contributing to the result.

If on terrain without real problems, such a disaster could happen to brave and well-disciplined troops, through an inability to direct fire & ignorance of the nature of the enemy they were engaging, then this provides a good lesson that these two aspects of warfare should receive close attention.⁶³⁸

At the time much of the blame for the defeat was laid on the behaviour of the rank and file.⁶³⁹ Wolfe, still in Britain, wrote that 'the cowardice and ill-behaviour of the men far exceeded the ignorance of the chief'.⁶⁴⁰ Stanley Pargellis has argued more recently that the blame lay with Braddock's failure to apply basic military precautions when on the march through enclosed country, be it in Europe or North America. This allowed the column, in the first instance, to be surprised and then to be unable to

⁶³⁵ Pouchot, *Memoirs*, p.139; The Journal of Robert Orme, p. 356.

⁶³⁶ Journal of the Operations of the Army from 22nd July to 30th September, 1755, Departement de la Guerre, Paris in E B O'Callaghan and B Fernow, (ed.), *Documents Relative to the Colonial History of the State of New York* (15 vols., Albany, 1853-57), vol x pp. 337-38.

⁶³⁷ The Journal of a British Officer, p. 50.

⁶³⁸ Pouchot, *Memoirs*, p.83.

⁶³⁹ *Gentleman's Magazine*, August, 1755, p. 380.

⁶⁴⁰ Letter to his father, 21 September, 1755, Willson, *Letters of James Wolfe*, p. 274.

react correctly to the attack.⁶⁴¹ However, even if the British had not been surprised and had been able to form an ordered two deep line against the attack, it is unlikely that they would have defeated the French and Indians. As the two French reports quoted above make clear, European style combat procedures were rendered impotent in the face of the irregular procedures. It was impossible for the British infantry to apply their traditional combat doctrine of first disrupting the enemy with effective musketry and then dispersing him by means of the bayonet. Monongahela was a victory of individual, aimed fire from cover over massed volleys delivered from in the open.

The effectiveness of irregular warfare was also demonstrated a few months later on 8 September 1755 in an engagement between British provincial forces and a French force of regulars, Indians and Canadians. The French were making a pre-emptive strike against a force advancing to attempt the capture of Fort St. Frederic. The ensuing fight was a long, confused affair that ended in victory for the provincial forces and the establishment of Fort William Henry while Fort St. Frederic remained in French hands. During the battle the irregulars on both sides made full use of the available cover, even the French regulars, after firing a few platoons 'went into the Indian way of Fighting, squatting below the Shrubs, or placing themselves behind the Trees'.⁶⁴²

The British Army's response to the difficulties of this sort of warfare was twofold. One measure was to endeavour to train the regular battalions in the rudiments of irregular

⁶⁴¹ Stanley Pargellis, 'Braddock's Defeat', in *The American Historical Review*, vol. 41, No. 2 (January, 1936), pp. 253-69.

⁶⁴² Samuel Blodget, *A Prospective Plan of the Battle near lake George and the Eighth Day of September, 1755* (London, 1756), p. 4.

warfare or bush fighting. The second measure was the introduction of their own light troops to take on the French irregulars on their own terms. One of the first and perhaps the most famous of these were Rogers' Rangers. This was not a regular British Army unit, but formed of Anglo-Americans. It was one of several ranger units, most of which proved themselves unreliable and ill-disciplined. Consequently British commanders determined to form their own light infantry subject to regular army discipline. However, many of the officers of the regular light infantry served with Rogers and learnt their bush craft from him. Rogers subsequently wrote down his rules for irregular warfare and these can be said to have formed the basis for the operational methods of British light infantry.

He first required that rangers carried sixty rounds of powder and ball. This was necessary because they spent considerable periods away from bases where they might resupply. He wrote extensively about the tactics of warfare in the woods, including a number of points that deal specifically with combat methods. If the enemy was firing he advised 'fall or squat down, till it is over, then rise and discharge at them'. When advancing against an enemy his instructions were for the rangers to keep well apart from each other and move from tree to tree in two lines, the first some ten or twelve yards ahead of the other. After the first line fired the second was to pass through and fire in turn while the first line reloaded. By this means the two lines could advance whilst keeping up a constant fire on the enemy. If receiving an attack his instructions were:

In general, when pushed upon by the enemy, reserve your fire until they approach very near, which will then put them into the greatest surprise and

consternation, and give you an opportunity of rushing upon them with your hatchets and cutlasses to the better advantage.⁶⁴³

There are two features of these instructions that stand out. One was the requirement for keeping up a constant fire; the other was the use of firepower backed up by close quarter combat.

Captain Knox added further details about the ammunition of the Rangers. He described them as carrying a bag which 'contains bullets, and a smaller shot, of the size of full-grown peas: six or seven of which, with a ball, they generally load'. This was also a practice of the French irregulars who are described as always loading with six or seven 'buck shot' as well as a normal ball.⁶⁴⁴

Bouquet also had his views on training light infantry.

They will be taught to handle their arms with dexterity; and without losing time upon trifles, to load and fire very quick, standing, kneeling or lying on the ground. They are to fire at a mark without a rest, and not suffered to be too long in taking aim.⁶⁴⁵

The emphasis had shifted to the effectiveness of the fire of the individual rather than a battalion, company or platoon. This new emphasis was also seen in other proposals concerning the development of light infantry.

One of the first proposals for forming light infantry from amongst the regular infantry came from Major George Scott in early 1758. He wrote to Lord Loudon, who had arrived in North America in July 1756, replacing Braddock as Commander-in-Chief, with proposals on how they should be equipped. He recommended a firelock that

⁶⁴³ Major Robert Rogers, *Journals of Major Robert Rogers* (London, 1765), pp. 59-65.

⁶⁴⁴ Captain John Knox, *An Historical Journal of the Campaigns in North America for the Years 1757, 1758, 1759 and 1760* (3 vols., London, 1769), vol. i, pp. 6 and 54.

⁶⁴⁵ Smith, *Expedition against the Ohio Indians* p. 49.

was shorter and lighter than the standard Long Land Pattern Musket with its forty six inch long barrel. Apart from being less of a burden a shorter, lighter musket was also quicker to bring to the aim and easier to keep on target, thus improving accuracy, particularly against briefly seen or moving targets. Furthermore the barrel was to be blackened, which served two purposes. It prevented the position of the firer being given away by sunlight reflecting off it and it also prevented reflected sunlight dazzling the firer. The musket was still to be provided with a bayonet, but it was to be short and light and in the form of a knife, making it a dual purpose item. Scott maintained that in the absence in North America of cavalry it did not need to be as long as the usual seventeen inches. The advantage of the lighter bayonet was the reduction in weight of the musket at the muzzle end, thus improving aiming.

Ammunition, in the form of cartridges, was to be carried in a tin cartridge box that would protect the ammunition from the damp. In a significant change Scott proposed a return to using priming horns, abandoned in the 1740s, instead of priming from the cartridge. These were to be filled with finer pistol powder, His argument was that the finer powder was easier to ignite than the slightly coarser powder used in muskets and that priming from a horn would avoid any loss of powder from the cartridge, ensuring the musket got a full load. He claimed that as much as half the powder in a cartridge was sometimes lost in priming, with the consequence that the resultant shot had neither its intended force nor range.⁶⁴⁶ The return to the use of priming flasks could be seen as a retrograde step, their abandonment had speeded up the loading process. However, since, according to Bouquet, light infantry were to load

⁶⁴⁶ Huntington Library, LO 6927, George Scott's proposal for light infantry, 13 February, 1758.

without 'losing time upon trifles' and were not handicapped by standing in closely packed ranks and files it is possible that there was no real loss of speed in reloading.

Loudoun, however, had already authorised the raising of what was the first regular light infantry regiment in the British Army, the 80th under Thomas Gage. A list of items supplied for equipping this new unit specifies a cost for 'Cutting and finishing' the 540 firelocks supplied, that is shortening them and possibly blacking the barrels as well. In addition 540 shot bags and powder horns were supplied.⁶⁴⁷

In May 1758 Major General Jeffrey Amherst was recently arrived in North America at Halifax, Nova Scotia, where he was making preparations for his assault on the French fortress of Louisbourg. He ordered the formation of light infantry from amongst the regular battalions, which were placed under the command of Major Scott. The men drafted from

the regiments, that have been any time in America, are to furnish such as have been most accustomed to the woods, and are good marksmen; and those from Europe are to furnish active marchers, and men that are expert at firing ball.⁶⁴⁸

Amherst subsequently ordered that this light infantry were to exchange their long and heavy Long Land Pattern firelocks for the lighter, shorter firelocks carried by the artillery.⁶⁴⁹ In his instructions for how they were to fight the influence of Rogers was clear, they were to 'generally fight in a single rank' and avoid huddling together, thus presenting their enemy with a target. They were apparently expected to load their muskets from powder horns, rather than just priming, as they were instructed to be

⁶⁴⁷ Huntington Library, LO 5065, 5072, 5074, 5075.

⁶⁴⁸ Knox, *Journal*, vol. i, pp.159-160.

⁶⁴⁹ Orders at Halifax, 12 May, 1758, Knox, *Journal*, vol. i, p. 161.

careful not to over load their guns and to have tow or paper ready cut to serve as wadding in the place of the paper of a cartridge.⁶⁵⁰

Early in 1759 Amherst, by then the fourth Commander-in-Chief in North America in as many years following Braddock, Loudoun and Abercromby, issued further directions for the equipment of the light infantry. In particular he stated that they were not to carry bayonets, instead they had a 'tomahock'.⁶⁵¹ Wolfe, however, once at Quebec, ordered the light infantry to carry them again, 'as the want of ammunition may sometimes be supplied with that weapon' adding that lack of ammunition was no excuse for a man to leave his post and that at night the bayonet was preferable to fire.⁶⁵²

Steps were also taken to train the regular battalions so that, if not as specialised as the light infantry, they could at least hold their own against the Indians and French Canadian irregulars. The Duke of Cumberland had insisted to Lord Loudoun that all American recruits to the army should be taught according to regulations.⁶⁵³ Wolfe had commented;

My Lord Loudoun... did adhere so literally and strictly to the one – two and the firings by the impracticable chequer, &c., that these regiments must necessarily be cut off one after another unless they fall into some method more suited to the country and the kind of enemy they have to deal with.⁶⁵⁴

This is somewhat harsh on Wolfe's part and it must be remembered that he was writing to Lord Sackville, a man of considerable influence and was promoting

⁶⁵⁰ CSK, Amherst Papers, Orders before Louisbourg, 1758, U1350/ 030/1.

⁶⁵¹ Knox, *Journal*, vol. i, p. 273.

⁶⁵² Knox, *Journal*, vol. i, p. 314.

⁶⁵³ Huntington Library, LO 1060, Robert Napier, Exercises for the American Forces, approved by His Royal Highness, April 18, 1756.

⁶⁵⁴ Wolfe to Lord George Sackville, Halifax, 24 May, 1758, Willson, *Wolfe*.

himself. In fact Loudoun did take measures to suitably train his infantry for bush fighting. In respect of the newly formed Royal American Regiment he wrote to the commanding officers of its three battalions in December 1756 insisting that the soldiers were trained to fire at marks and to learn to load and fire kneeling and lying on the ground.⁶⁵⁵

One of Loudoun's Brigadiers, John Forbes, wrote of the necessity for training troops in the specialist nature of bush warfare. When attacked he believed that untrained troops would be killed or flee whereas a trained and experienced bush fighter would take cover 'behind some tree stumps or stone, where he becomes his own Commanding Officer, acting to the best of his judgement for his own defence and General Good of the whole', thus squarely placing the emphasis on the individual soldier rather than a unit.⁶⁵⁶ In a letter to Bouquet he recognised the need to adapt to the local form of warfare, 'And I must confess in this country, we must comply and learn the Art of War from Enemy Indians or anything else who have seen the Country and Warr carried on in it'.⁶⁵⁷ It was possibly Forbes who introduced the order 'tree all' into the regulars' repertoire. If ambushed or otherwise surprised this order resulted in the men immediately seeking cover individually behind trees or rocks. From there they could return fire, again individually.⁶⁵⁸

In 1758 Forbes led an expedition to capture Fort DuQuesne, which was abandoned by the French in the face of his advance and renamed Fort Pitt by Forbes, who died soon after taking possession of it. Prior to the expedition setting out Forbes had

⁶⁵⁵ Stanley M Pargellis, *Lord Loudon in North America*, (Yale 1933, reprint 1968), p. 299.

⁶⁵⁶ National Archives of Scotland, RH 4/86/2, Undated memo in Forbes' hand (early 1757).

⁶⁵⁷ BL Add Ms 21640 f70, 27 June, 1758.

⁶⁵⁸ Brumwell, *Redcoats*, p. 217 and Pargellis, *Lord Loudon in North America*, p. 300.

spent considerable time and trouble training his command. A letter to him from Bouquet speaks of the need to buy two or three hundred barrels of gunpowder in order to train provincial recruits and 'to drill our troops in forest warfare'. The same letter also spoke of the need to provide the provincials with lead in bars. This was because some of them were armed with rifles, weapons that were not of a military calibre, and it was thus necessary for the provincials to cast their own balls for these.⁶⁵⁹ The rifle was a more accurate weapon than the issue musket, but the necessity for the balls to be a tight fit, in order to grip the rifling that imparted spin to the ball thus improving accuracy, meant that they were slower to load. A few were issued to marksmen amongst the regulars, but they were most commonly found in the hands of Indians and irregulars. The rifle seems to have had little impact on the warfare of the day and was not seen in any number in the British Army until the formation of the 95th Rifles during the Napoleonic Wars. It did not reach the hands of the ordinary redcoat until the mid-19th century when the development of the Minie ball overcame the loading problem.

The training of Forbes' men included 'running & firing in the Indian Manner'.⁶⁶⁰ The Rev. Thomas Barton who accompanied the expedition has also left a description of how this firing was organised. For battle the men formed in a single rank and were divided into platoons of twenty. There was no attempt to coordinate the fire of the different platoons, but within each platoon the men fired individually, starting with the right hand man, followed by the left hand man and then alternating right and left until the fire reached the centre of the platoon. Before the fire reached the centre the first

⁶⁵⁹ Forbes to Bouquet, 7 June, 1758, S K Stevens, Donald H Kent and Autumn L Leonard (eds.), *The Papers of Henry Bouquet* (Harrisburg, 1951), vol. ii, p. 50.

⁶⁶⁰ William A Hunter (ed.), 'Thomas Barton and the Forbes Expedition', in *The Pennsylvania Magazine of History and Biography*, vol. 95, No. 4, (1971), pp. 431-83 and p. 449.

men to fire were reloaded and ready to fire again. By this means a continuous fire was maintained across the front of each platoon in the same manner as it was by companies in battalions using the alternate fire system.⁶⁶¹ Bouquet's Order Book for the same expedition adds the detail that each platoon was to be commanded by an officer or a sergeant.⁶⁶²

Also in the summer of 1758 Amherst was leading his army against the important fortress and port of Louisbourg. It is clear that Amherst had little respect for the Indians and their way of war, calling them cowards and barbarians and expressing astonishment that they had managed to beat Braddock. However, he clearly understood how they fought and how to beat them.

Their whole dependence is upon a tree, or a bush, you have nothing to do, but to advance & they will fly, they never stand an open fire or an attack. Our irregulars and light Infantry are certainly of great use & should always accompany an Army in this Country, as these troops drive them out of their shelter, harass them continually & beat them in their own way.⁶⁶³

Amherst's orders to his regulars for a field day dealt with an advance by four battalions lead by an advance guard of two platoons. If attacked the left hand of these two platoons was to fire 'singly', that is each man individually. This was to be followed by the right hand platoon firing 'the whole together', after which the left hand platoon was to begin firing again as before. It is difficult to see what Amherst thought this mix of firing styles might achieve. It is possible that he thought the individual firing would protect the platoon firing a single volley from the attentions of irregulars who fought as individuals whilst the sheer power of a platoon volley might overwhelm or, at least intimidate, an enemy and prevent them from advancing while the

⁶⁶¹ Hunter (ed.), 'Thomas Barton and the Forbes Expedition', pp. 431-483, p. 450.

⁶⁶² 7 August, 1758, Stevens, *Bouquet*, vol. ii, p. 673.

⁶⁶³ CKS, Amherst Papers, U1350/0100/2, 18 June, 1758.

following battalions deployed. These four battalions were to form two lines, with the flank sub-divisions wheeled outwards to protect the flanks. After the two leading battalions had fired the second line was to pass through and fire in turn.⁶⁶⁴ To pass through each other would require the battalions to be in a very loose order and possibly in a single rank. This is very much like Rogers' fire and movement tactic, but on a much larger scale.

In early December 1758 Forbes left Fort Pitt to return to Philadelphia where he died the following March. In his absence Bouquet gave instructions to Colonel Hugh Mercer who was charged with the defence of the Fort. In these he wrote; 'Your best marksmen only should fire from the Fort, The other to load for them; Each man having two muskets'.⁶⁶⁵ In this order there is an echo of Field Marshal Saxe. In his *Reveries* he had advised that the most effective fire could be achieved in a similar method with one man firing while four loaded for him.⁶⁶⁶ In both cases the result was to make the most effective use of the best individual marksman available.

By June 1759 Amherst had replaced Abercromby as the Commander-in-Chief in North America and was assembling his army at Fort Edward. There, both newly arrived provincial troops and the regulars were kept busy, firing at marks and practicing 'forming and dispersing in the woods, and in other exercises adapted to the peculiar method of carrying on war in close-covered countries'.⁶⁶⁷ However, this was the year in which the outcome of the war was decided and that happened in open and relatively conventional battle against the French.

⁶⁶⁴ CKS, Amherst Papers, U1350/0100/2 10 July 1758.

⁶⁶⁵ Stephens, *Bouquet*, vol. ii, p. 634.

⁶⁶⁶ Saxe, *Reveries*, p. 72.

⁶⁶⁷ Knox, *Journal*, vol. i, p. 369.

It has already been shown above that early in 1755 Braddock had ordered his troops to make use of the alternate system of delivering a battalion's fire and that at the same time Wolfe had been introducing alternate fire to his battalion in England. This was clearly contradictory to the regulations then in force, which, for the delivery of fire, were the regulations authorised by the Duke of Cumberland in 1748. Prior to becoming Colonel of the 14th Foot in 1753 and a Major-General in 1754 Braddock's entire career had been in the Coldstream Guards and thus very much under the eye of the Duke of Cumberland, who seems to have been instrumental in getting Braddock his North American command.⁶⁶⁸ Whilst the influence of the Duke of Richmond on the young Lieutenant Colonel Wolfe has been considered, a different explanation offers itself for Braddock's innovation. During the War of Austrian Succession Frederick the Great had acquired a considerable reputation for his successes against the Austrians, much of which was due to his infantry. In 1754 a translation of the Prussian Infantry manual was published in London that contained detailed instructions on how the Prussians executed alternate fire, using eight fire units in a battalion.⁶⁶⁹ The two battalions with Braddock had come from the Irish Establishment and were thus well below full strength.⁶⁷⁰ They had been brought up to strength by drafts from other battalions and recruiting in America. It would seem probable that Braddock, recognising that these battalions lacked cohesion and training, tried to keep things simple by introducing the far less complex Prussian alternate fire instead of Cumberland's complex system of 1748.

⁶⁶⁸ Paul E. Kopperman, 'Braddock, Edward (*cap.* 1695, *d.* 1755)', *Oxford Dictionary of National Biography*, Oxford University Press, 2004; online edn, Jan 2008 [<http://www.oxforddnb.com/view/article/3170>, accessed 6 April 2012].

⁶⁶⁹ William Faucitt (trans.), *Regulations for the Prussian Infantry, Translated from the German Original* (London, 1754).

⁶⁷⁰ Anderson, *Crucible of War*, p. 72; Houlding, *Fit for Service*, p.421.

Braddock's replacement, Loudoun, has already been noted as adhering strictly to regulations, but it has to be borne in mind that the 1756 Platoon Exercise had just been issued and that Loudoun had been given very specific instructions about adhering to them. Loudoun's successor, Major General Abercromby, had gone out to America with Loudoun and so was operating under the same understanding. When Abercromby replaced Loudoun as Commander-in-Chief in early 1758 he also received assistance in the form of the arrival of new senior officers. To lead the attack against Louisbourg was Major General Amherst, assisted by Brigadier James Wolfe. Brigadier Lord Howe was to assist Abercromby in his attack on Fort Carillon.

In July Abercromby launched his attempt against Fort Carillon. It ended in disaster. Lord Howe was killed in an opening skirmish and Abercromby hurled his regulars forward in a frontal assault, without artillery support, against French field works protected by an abatis of felled trees. The regulars were shot down without reaching the French and Abercromby was forced to retreat. Abercromby was recalled and command passed to Amherst in September 1758.

Although Amherst formed light infantry and took measures to adapt his regulars to irregular warfare he appears to have taken no steps to alter the drill that the regulars would use against the French regulars they would meet at Louisbourg, other than to order that they should load their muskets with two balls.⁶⁷¹ The assault on Louisbourg was preceded by an amphibious landing under fire in which Wolfe played

⁶⁷¹ CKS, Amherst Papers, U1350/030/1.

a conspicuous role in achieving a successful landing. The assault on Louisbourg itself was an almost European siege and Louisbourg surrendered on 26 July 1758.

Amherst had served on the Duke of Cumberland's staff, but he was quick to put aside the 1748 firings and introduce alternate fire to the army now under his command.⁶⁷² In April 1759 he had ordered each battalion to form a light infantry company, but in May he withdrew those and the grenadier companies of each battalion in his command, then in Albany, to form composite light and grenadier battalions. The remaining eight companies were

at all times to be told off in four grand divisions, eight subdivisions, and sixteen platoons; and this must be done without breaking the companies, if the numbers be nearly equal, except in[to] the platoons, that each company must be subdivided to form two platoons. The Officers will be posted, as much as the service will permit, to the companies they belong to.⁶⁷³

By specifying that the companies, so long as they were all roughly the same size, should form the basic fire unit and only be divided to form two platoons, all with their own officers, Amherst was placing considerable emphasis on the benefits of the natural cohesion to be found in companies where the men lived together and were commanded by officers they knew.

Meanwhile, at Louisbourg, Wolfe was preparing his army for the attempt on Quebec. Captain John Knox of the 43rd recorded the preparations. It would appear that there was some concern amongst battalion commanders about 'a new system of discipline'. This could have been a reference to either the introduction of alternate fire by Amherst or the new *1757 Regulations* or, indeed, both. When this issue was

⁶⁷² William C. Lowe, 'Amherst, Jeffrey, first Baron Amherst (1717–1797)', *Oxford Dictionary of National Biography*, Oxford University Press, 2004; online edn, Sept 2010 [<http://www.oxforddnb.com/view/article/443>, accessed 6 April 2012].

⁶⁷³ Orders, 5 May 1759, Knox, *Journal*, vol. i, p. 360-361.

raised with Wolfe he is reported to have responded with ‘Pho, pho! – new exercise – new fiddlesticks; if they are otherwise well disciplined and will fight, that’s all I shall require of them’.⁶⁷⁴

One of the battalions not familiar with the new exercise would appear to have been Knox’s. Prior to setting out to join Wolfe’s army in May 1759 they had spent twenty two months manning various garrisons in Nova Scotia.⁶⁷⁵ Whilst in garrison they had done what they could to maintain military efficiency, but it is no surprise that such things as the *1757 Regulations* and the new fashion for alternate fire had passed them by. However, prior to leaving their garrisons to join the main army Knox recorded:

The 43d regiment are at exercise every morning, and discharge ammunition cartridges; in the afternoon the men are employed in firing at targets, in which they are encouraged by presents from their Officers, according to their several performances.⁶⁷⁶

The practice of individual marksmanship is a constantly recurring activity amongst all troops throughout the war in North America.

Once with Wolfe’s army the 43rd appear to have been quickly introduced to the new method of delivering a battalion’s fire. Knox described firing alternately from right and left to the centre by platoons, sixteen in all, and then by sub-divisions, each platoon or subdivision under the command of its own officers. Whilst this was another description of the conduct of alternate fire Knox added two interesting observations. First he described its effectiveness. The exercise was carried out in a field of wheat

⁶⁷⁴ Knox, *Journal*, vol. i, p. 270.

⁶⁷⁵ Knox, *Journal*, vol. i, p.239.

⁶⁷⁶ Knox, *Journal*, vol. i, 233.

and he wrote 'I never saw grain closer cut down by the reap-hook, or scythe, than this was'. Knox also recorded that 'the method we were ordered to observe did not admit of any confusion, though we fired remarkably quick'.⁶⁷⁷ This was the unbiased view of a professional officer that alternate fire was accurate, effective and could be delivered quickly and without confusion, confirmation of its superiority to Cumberland's 1748 firings.

Nor was the use of the bayonet neglected, in a passage redolent with the contempt of a seasoned professional Knox described a demonstration by a sergeant from another regiment of what he called 'a new method of pushing bayonets', which caused considerable mirth amongst the men. It may have been new to Knox, but this new drill was nothing less than the old style of charging a musket and bayonet like a pike. It would appear that the 43rd had long since given that up, presumably in preference for the new style of holding the musket and bayonet levelled at waist height. Knox described how the sergeant held the firelock 'which he poked out before him, in like-manner as an indolent hay-maker turns hay with a forked pole'. His verdict was 'I thought it ludicrous'.⁶⁷⁸

In July 1759 Amherst gave orders that his infantry were to form and fight in just two ranks 'as the enemy have very few regular troops to oppose us, and no yelling of Indians, or fire of Canadians, can possibly withstand two ranks'.⁶⁷⁹ This development appears to have been general throughout North America as Wolfe's Army used it at

⁶⁷⁷ Knox, *Journal*, vol. i, p. 331-332.

⁶⁷⁸ Knox, *Journal*, vol. i, p. 332.

⁶⁷⁹ Knox, *Journal*, vol. i, p.385.

Quebec and the following year Amherst recorded exercising infantry in both three and two deep lines.⁶⁸⁰

The analysis of the effectiveness of the new bush fighting techniques for regulars, light infantry and rangers reveals that success against the French and Indian irregulars did not come quickly and that there were many other factors involved besides actual combat techniques. However, British infantry at least began to be able to hold its own against irregulars so that it could engage the French regular forces in the engagements that would decide the outcome of the war. Accounts of Wolfe's campaign against Quebec are full of accounts of the continuous low intensity warfare that epitomised irregular combat. One account confirms the individual nature of both the the firing and the close quarter combat. A soldier of the 35th described a skirmish where he saw an Indian aim at him, but miss, he then aimed at the Indian and missed in turn, whereupon the Indian threw his tomahawk at him, but missed, and the soldier threw it back and missed. The soldier was then attacked from behind and hit in the back with a tomahawk, but escaped.⁶⁸¹ On another occasion at Quebec:

An Indian Swam over... with an intention as we suppose to Scalp a Centry, but on the Centry running up to him and presenting his piece to his breast he got down on his knees threw away his knife and deliver'd himself up.⁶⁸²

Gradually the British infantry began to acquire a degree of ascendancy over their irregular opponents. One officer recorded that small parties were constantly attacked

⁶⁸⁰ J Clarence Webster (ed.), *The Journal of Jeffrey Amherst, 1758-1763* (Toronto, 1931), p. 224.

⁶⁸¹ 'A Journal of the Expedition up the River St Lawrence by the Serjeant-Major of Gen. Hopson's Grenadiers', in A Doughty and G W Parmalee, *The Siege of Quebec and the Battle of the Plains of Abraham* (six volumes, Quebec, 1901), vol. v, p. 5.

⁶⁸² Letters and Papers Relating to the Siege of Quebec in the possession of the Marquess Townshend in Doughty, *Siege of Quebec*, vol. v., p. 257.

by the enemy who was always repulsed, but not without casualties. He added 'These skirmishes had indeed the good effect of using our men to the woods, and familiarising them with the Canadians and Indians, whom they soon began to despise.'⁶⁸³ By October 1759, after the fall of Quebec, a NCO was able to record that 'By this time our small reconnoitring detachments began to appear terrible among the skulking parties of Canadians and Indians.' He described how the Indians would not face them in the open, but would lie in ambush at the edges of woods, firing and then rushing out to attack. At length the Indians 'learned us to be as good hunters as themselves' so that a small number of British were often able to see off larger numbers of Indians. He gave as an example an incident where a sergeant with a corporal and twelve men was cut off from his regiment by a large body of enemy irregulars. Four days later the party returned having lost only two men.⁶⁸⁴

The competence of the British infantry in Indian fighting was most notably demonstrated at the fight at Bushey Run on 5 and 6 August 1763. The Treaty of Paris, signed on 10 February 1763 had brought an end to hostilities between Britain and France, but in North America an Indian uprising, Pontiac's War, broke out on the western frontier. Colonel Bouquet was leading a relief column to Fort Pitt when his convoy was surrounded and pinned down by Indians near a stream that gave its name to the battle. Bouquet and his men took up a position on a hill where they constructed a makeshift breastwork with bags of flour. Of the first day of the battle Bouquet remarked on 'the cool and steady behaviour of the Troops, who did not fire a Shot without orders, and drove the enemy from their Posts with fixed Bayonets'.

⁶⁸³ 'The Journal of Major Moncrieff' in Doughty, *Siege of Quebec*, vol. v., p. 47.

⁶⁸⁴ 'Memoirs of the Siege of Quebec and Total Reduction of Canada in 1759 and 1760 by John Johnson, Clerk and Quarter Mas'r Sergeant to the 58th Reg't', in Doughty, *Siege of Quebec*, vol v., p.116-117.

Robert Kirk of Montgomery's Highlanders wrote that when charged with bayonets the Indians ran away, but as Bouquet wrote, only to return to the attack. On the second day of the fight British casualties were mounting and Bouquet's force was short of water. He therefore contrived to lure the Indians into an unfavourable position. He weakened part of his defensive perimeter, which the Indians mistook for an indication of retreat and attacked vigorously. However, Bouquet had used the withdrawn infantry to make a flanking move against the Indians. As they attacked they were caught in the open where they received the full fire of four companies followed by a bayonet charge. Bouquet referred to the 'irresistible Shock of our Men, who rushing in among them, killed many of them, and put the rest to flight'.⁶⁸⁵ Kirk wrote 'we met them with our fire first, and then made terrible havock amongst them with our fixt bayonets'.⁶⁸⁶

Platoon fire was also shown to be effective against Indians under the right circumstances. During some of the low level skirmishing at Quebec 'the Rangers, Light Infantry and advanced parties continued popping with the enemy...Captain Campbell...ordered a part of his Company to fire a volley at them, when the firing almost ceased'.⁶⁸⁷ Again, in 1761 during a campaign against the Cherokee, in the midst of skirmishing between light infantry and Indians, a regularly formed battalion took decisive action:

A close Fire from the Regiment for some Minutes, and Orders punctually executed of throwing a Platoon of Fire into every Bush where the least smoke

⁶⁸⁵ Louis M Waddell (ed.), *The Papers of Henry Bouquet* (Harrisburg, 1994), p. 339-343.

⁶⁸⁶ Robert Kirk, *The Memoirs of Robert Kirk, Late of the Royal Highland Regiment, Written by Himself* (Limerick, 1791), pp. 77-79.

⁶⁸⁷ Brigadier R Alexander, (ed.), 'The Capture of Quebec. A Manuscript Journal Relating to the Operations Before Quebec From 8th May, 1759, to 17th May, 1760, Kept by Colonel Malcolm Fraser. Then Lieutenant in the 78th Foot (Fraser's Highlanders)', in *JSAHR*, vol. xviii, (1939), pp135-68; 140-1.

appeared, saved the Lives of a number of brave Fellows, drove the Indians back to great Distance.⁶⁸⁸

Whilst success against Indians and French Canadian irregulars enabled the British Army to prosecute the war it was in open battle against French regulars that the outcome of the war was decided. In July 1759 British forces were besieging Fort Niagara when a French relief force approached. This force of some 800 French regulars and militia and 300 Indians was opposed by 464 British regulars, mostly of the 46th, under the command of Lt. Col. Eyre Massey at La Belle Famille. Seeing that the French had regulars Massey ordered his front rank to fix bayonets, an indication that bayonets were considered inappropriate against irregulars, presumably because of the difficulties of getting in close enough to use them and the negative effect on accuracy of the weight of a bayonet on the muzzle of the musket. In another indication of the influence of irregular warfare Massey ordered his whole line to lie down. Massey estimated that the French, who advanced in column along a road, fired twice in their advance, about 500 rounds, then, when his men 'could almost reach them with our Bayonets' he gave the order to fire. Massey described the troops that met the French head on as a grand-division and wrote that it fired seven rounds standing. As he wrote that he 'gave the Word for the Whole to Fire' it would seem most likely that he fired as a grand division. With his light infantry, 108 men, covering his left flank this grand division probably numbered about 225, supported by the grenadiers of the 46th and a picket of the 44th, about 125 men, who were covering the right flank. At the same time his grenadiers outflanked the French 'and

⁶⁸⁸ Extract of a Letter from an Officer in the Regulars, dated July 10, 1761, in *The London Evening Post*, 3 September, 1761 – 5 September, 1761, Issue 5284.

by their pouring in all their fire, on the Enemy's Flanks, kill'd great numbers, and in my opinion was the occasion of breaking them'. Massey's force then advanced and fired another eight rounds, 'by constant firing', making fifteen in all, and then charged with the bayonet.⁶⁸⁹

Massey's force was considerably outnumbered, by about two to one without counting the Indians accompanying the French. Massey's own Iroquois allies did not engage the French until they were already retreating. Because he had detached his grenadiers and light infantry to cover his flanks the main assault of the French pitted approximately 800 French against 225 men directly to their front and perhaps 125 on Massey's right flank. When numbers were evenly matched British battalions appear to have usually found it necessary only to fire once or twice before charging with the bayonet. Here, outnumbered four to one, the main body of the 46th fired seven times, perhaps 1500 rounds. If the grenadiers and picket on his right did the same that would have been another seven or eight hundred rounds and although Massey reported that half the grenadiers were killed or wounded he expressed the view that this fire into the French flank was decisive. The initial fire of the British infantry was clearly sufficient to stop the French attack in its tracks, probably helped by the French advancing in column so that the head of the column attracted the main weight of the British fire. The heavy casualties suffered by the grenadiers might have been a consequence of them facing the long flank of the French column from which fire was returned while the main British body faced the relatively narrow head of the

⁶⁸⁹ National Archives, WO34/53 f6, Massey to Amherst, Oswego, 30 July, 1759; National Archives, PRO 30/8/49 f9, Massey to Amherst, Oswego, 30 July, 1759; Captain Charles Lee to Sir William Bunbury, 9 August, 1759, *New York Historical Society, Collections*, Volume 1 (New York, 1872), p. 21.

column. The disparity in numbers meant it took longer, perhaps two or three minutes, less if tap loading, to deliver the fire to cause sufficient casualties to break the French. Massey had to rely on his firepower in order to avoid being overwhelmed by French numbers. When the French began to retreat a further eight rounds a man were fired and Massey's reference to 'constant fire' suggests that he switched from volleys of the whole body together to firing by sub-divisions or platoons. When Massey was sure that the French were sufficiently broken he then sent them on their way with a bayonet charge.

The battle that effectively decided the outcome of the war in North America was fought on the Plains of Abraham, in front of Quebec, on 13 September 1759. Wolfe had contrived to land his army upstream of Quebec under cover of darkness and Montcalm, the defender of Quebec, marched out to meet him. The decisive action was between six of Wolfe's battalions and seven of Montcalm's. In Wolfe's six battalions facing Quebec there were a little more than 1700 muskets and Montcalm's numbered a little under 2000, but supported by about 1500 irregulars. Five other British battalions were covering Wolfe's flanks and rear.⁶⁹⁰ At least one of Wolfe's battalions was drawn up in two ranks, Anstruther's 58th on the extreme left of the line. An account by a soldier in that battalion also recorded that the files were three feet apart. No other account mentions this and it is possible that the 58th were forced to spread themselves so thin in order to cover the ground between the main line and the position of the battalions protecting their left flank. Elsewhere, although not specifically mentioned, it seems probable that the infantry were formed two deep

⁶⁹⁰ Reid, *Wolfe*, pp.189- 194.

with files at a more conventional spacing in accordance with Amherst's general orders.⁶⁹¹

As the French advanced they began firing at the British line from about 100 yards away or more, which fire was steadfastly ignored.⁶⁹² According to Knox, the 43rd at least was ordered to lie down.⁶⁹³ At least four of Wolfe's six battalions reserved their fire until the French were less than forty yards away. One battalion, the Louisbourg Grenadiers, are recorded to have waited until the range was less than twenty yards.⁶⁹⁴ Wolfe had ordered that the muskets should be loaded with two balls.⁶⁹⁵ Townshend, commanding the battalions covering the left flank described the fire of the British line, 'it was regular proved effect and constant – they were routed in three discharges,' while Lt. Fraser with the 78th wrote that the firing continued for six or eight minutes.⁶⁹⁶ Johnson with the 58th wrote 'we poured in such a discharge; and which we continued, with such a regular briskness, as was visible to all, by the god effect it produced.'⁶⁹⁷ Humphreys with the 28th wrote that the firing 'was so well continued, that the enemy everywhere gave way.'⁶⁹⁸ Knox recorded 'a well timed, regular, and heavy discharge of our small arms, such as they could no longer oppose, hereupon they gave way, and fled with precipitation', adding:

The forty-third and forty-seventh regiments, in the center, being little affected by the oblique fire of the enemy, gave them, with great calmness, as

⁶⁹¹ Knox, *Journal*, vol. i, p.385.

⁶⁹² Knox, *Journal*, vol. ii, p.70.

⁶⁹³ Knox, *Journal*, vol. ii, p.70.

⁶⁹⁴ Knox, *Journal*, vol. ii, p.70; Townshend Papers, in Doughty, *Quebec*, vol. v, p. 217; 'A Journal of the Expedition up the River St Lawrence by the Serjeant-Major of Gen. Hopson's Grenadiers', in Doughty, *Quebec*, vol. v, p. 10.

⁶⁹⁵ Knox, *Journal*, p. 71.

⁶⁹⁶ Townshend Papers in Doughty, *Quebec*, p. 271; 'Malcolm Fraser, The Capture of Quebec', *JSAHR*, vol. xviii (1939), pp. 135 – 168, p. 156.

⁶⁹⁷ 'Memoirs of the Siege of Quebec and Total Reduction of Canada in 1759 and 1760 by John Johnson, Clerk and Quarter Mas'r Sergeant to the 58th Reg't' in Doughty, *Quebec*, p. 104.

⁶⁹⁸ BL Add Mss 45662 Journal of Richard Humphrys, 28th Foot.

remarkable a close and heavy discharge, as ever I saw performed at a private field of exercise, insomuch that better troops than we encountered could not possibly withstand it: and, indeed, well might the French Officers say, that they never opposed such a shock as they received from the center of our line, for they believed every ball took place, and such regularity and discipline they had not experienced before; our troops in general, and particularly the central corps, having levelled and fired, - comme une coup de canon.⁶⁹⁹

This firing was followed by a general advance with the bayonet, or, in the case of Fraser's 78th Highlanders, the broadsword.⁷⁰⁰ The fighting was not over, some French fought a rearguard action as they withdrew into Quebec, but the battle was won, although Wolfe himself was killed in the moment of victory. The French commander, Montcalm was also killed and Quebec surrendered on 18 September 1759.

The Battle of Quebec was won by a classic combination of firepower and the bayonet. The French attack was met at a range of less than forty yards with the fire of approximately 1700 muskets, each loaded with two balls and wielded by soldiers who were arguably better shots than any British soldiers before. Townshend's three discharges would have delivered about 5,000 rounds, or 10,000 balls, at the 2,000 French attacking the British line. All the eyewitnesses are clear that the firing was continued after the initial volley. Three of them make use of the word regular, suggesting that after an initial full battalion volley the firing continued by sub-divisions employing alternate fire. It is perhaps little wonder that one French officer wrote 'Our troops gave the first fire, the British the second, and the affair was over.'⁷⁰¹

⁶⁹⁹ Knox, *Journal*, vol. ii, p, 71.

⁷⁰⁰ Townshend Papers in Doughty, *Quebec*, pp. 217, 220 and 271; 'Fraser, Quebec', *JSAHR*, p. 156.

⁷⁰¹ Knox, *Journal*, vol. ii, p, 97.

In April 1760 the French attempted to recapture Quebec and Murray, commanding the British defenders, decided to meet the French in battle, outside Quebec at Sainte Foy. The British were heavily outnumbered and this, combined with tactical errors by Murray resulted in defeat. The British battalions had been forced to form in two ranks with three feet between files in order to cover their front, but this was too thin and they were overwhelmed by French numbers, particularly when their supporting artillery began to run out of ammunition.⁷⁰² A small spotlight was thrown on the character of infantry combat in this battle when Lieutenant Eubele Ormsby of the Grenadier Company of the 35th was subsequently tried by court martial, accused of cowardice.⁷⁰³ Ormsby's company was involved in fierce fighting for control of a windmill on the British right flank. He described how the company first fired in a regular manner with the front rank kneeling. Other soldiers described the subsequent advance to the windmill in confusion and small bodies and how Ormsby had directed them where to fire. One told the court martial that he lost all his ammunition and went to get more, but without saying how or from where, presumably the officers of the court knew and this was not considered worthy of mention. Another said he had fallen behind the company in order to change his flint.

From the record of this court martial small snippets of information can be gleaned about the minutiae of the management of British infantry fire. The company was divided into two platoons that at times operated separately, although in close proximity to each other. There appears to have been some means for soldiers to replenish their ammunition, although this could simply have been taking it from the

⁷⁰² Johnson in Doughty, *Quebec*, p. 121.

⁷⁰³ National Archives, WO71/68 General Court Martial, 1 June 1761, Quebec, Lieutenant Eubele Ormsby, 35th Regiment.

dead and wounded. When a soldier need to change a flint he appears to have just fallen out and got on with it. Ormsby was cleared by the court martial.

Following the battle, Quebec held out until relieved by the Royal Navy. On 8 September 1760 Montreal surrendered and the war with France in North America was over. In the absence of cavalry and the limited participation of artillery, save in siege warfare, it was a war won by the infantry. Following serious, initial setbacks the infantry had adapted to a completely new form of warfare, irregular, bush fighting. It learned from allies and enemies and achieved at least parity and occasionally superiority over enemies raised knowing only that form of war. This was done, however, without any change in the infantry's traditional combat doctrine. The efficiency of the firepower of a battalion was replaced with the efficiency of the individual. The adaptability of the infantry allowed individual marksmanship to replace volume and speed of fire as the prime desirable quality. In the case of the light infantry this objective was pursued with the assistance of specially adapted firelocks and other equipment and specialist training. The object was still to overwhelm and disrupt the enemy with firepower and then to close with the bayonet, broadsword or tomahawk to disperse him and drive him off. This was not always easily achieved, particularly when actually getting to grips with an enemy such as the Indians who would simply retire in the face of superior firepower, but the end result was the same. When the infantry could get at their irregular opponents with the bayonet, as at Bushy Run, the Indians had no answer to it.

When it came to more conventional, European style combat the infantry were arguably better than ever. Not only did they adopt the alternate fire system with all its

advantages of speed and simplicity, but they were, at the least, competent marksmen and the effectiveness of their fire can only have been increased, particularly at the short ranges they continued to prefer. The British, as Knox put it,

do not expend their ammunition at an immense distance; and if they advance to engage, or stand to receive the charge, they are steady, profoundly silent and attentive, reserving their fire until they have received that of their adversaries, over whom they have a tenfold advantage.⁷⁰⁴

The campaigns in North America also saw the appearance of the two deep line as part of the tactical repertoire of British infantry. Its success against the French at La Belle Famille and Quebec was an early forerunner of the way the infantry would fight under the Duke of Wellington in the Peninsular War. However, despite this increased reliance on firepower the infantry also retained their penchant for close quarters combat. At both La Belle Famille and Quebec it was the bayonet that completed the work that firepower had begun and completed the victory. Even at Sainte Foy a French officer remarked how the British infantry had 'advanced upon us with their bayonets, which, according to custom, threw us into confusion, and compelled us to give up the contest'.⁷⁰⁵

⁷⁰⁴ Knox, *Journal*, vol. ii, p. 57.

⁷⁰⁵ Knox, *Journal*, Vol. ii, p. 327.

9: Conclusion

The starting point for this research was the work of modern writers of military history, amongst whom there is a widely held consensus that the infantry of Britain's armies of the seventeenth and eighteenth centuries repeatedly achieved a high level of effectiveness and superiority over their enemies in firepower and relied on that firepower to win battles. Although that assessment is justified by the narrative of the history of the British Army there has not been a sufficiently searching investigation to explain how that superiority was first achieved and then maintained over such a long period.

As a result of this work that explanation has been established. In doing so it has been possible to identify the tactical doctrine and battlefield combat techniques of British infantry and to analyse their effectiveness, starting with the English Civil Wars and then tracing a continuous line of development of doctrine and technique up to 1765, in the immediate aftermath of the Seven Years War. In identifying that line of development it has also been possible to identify previously unrecognised aspects of doctrine and technique, and to pinpoint times when key changes were brought about, such as the introduction of the organisation of platoons into firings. As a consequence of this detailed analysis some long held misconceptions can be identified and corrected, such as that concerning the form that platoon firing first took.

There are some related tactical issues that had a bearing on the successes of British forces that have not been considered here, such as the actions of the other sections

of the army. On occasion artillery played its part, particularly during the period when battalions had pairs of guns attached to them to bolster their firepower. For instance, at Culloden there was a pair of three pounder cannon in every gap between the battalions in the front line. One of those between Barrell's and Monro's fired it's last round of grapeshot at a range of only six feet. While it is usually stated that the rate of fire of artillery was two rounds a minute, there is evidence to suggest that far higher rates of fire were achievable, sometimes in excess of ten rounds a minute, with clear implications for battlefield effectiveness. At Fontenoy and Minden, however, the infantry were deprived of this support, although the Royal Artillery did come in to action to give some protection the right flank of the infantry at Minden. At Quebec the single cannon that the Royal Artillery got on to the battlefield is recorded as causing significant casualties. However, the artillery of the period covered is outside the scope of this work and it worth pointing out that the contemporary correspondence of infantry is largely silent on the matter.

The influence of the other part of the army, cavalry, has also been omitted. Its actions, such as at Warburg, and inactions, as at Minden, were often vitally important to the success or otherwise of British forces.⁷⁰⁶ The charge of the allied cavalry at Laffeldt enabled the infantry to make their retreat successfully.⁷⁰⁷ But the way the cavalry fought did not influence the methods of the infantry and the two arms frequently fought their own, separate battles.

⁷⁰⁶ Fortescue, *History of the British Army*, vol. ii, , pp. 508-512; Piers Mackesy, *The Coward of Minden, The Affair of Lord George Sackville* (London, 1979).

⁷⁰⁷ Whitworth, *Field Marshal Lord Ligonier*, pp. 154-60.

The nature of the enemy, almost invariably the French, was also important. Given the repeated success of British infantry against them, it is surprising that the French did not adopt any of their combat techniques. However, while the British were always fighting the French, the reverse is not true. France had many enemies during the period under consideration and Britain was a relatively minor military power, so far as its army was concerned, and thus was of limited influence on the art of warfare outside its own forces. On a global scale the Royal navy was far more important. In addition the French consistently held to the belief that their forte was the attack and that in the attack firepower was less important than élan and the bayonet.

In order to carry out this work it has been necessary to employ a new, practical military history approach, which is concerned with the detailed study of the practices and procedures of armed forces, understanding precisely how they went about doing things. This has been achieved by a detailed examination of drill books and manuals and contemporary discussion of combat techniques. This has made possible both the interpretation of those sources and the identification of previously unrecognised drills and developments, such as platoon firing as described in Mackay's *Rules* and the introduction and organisation of firings. This has in turn ensured the correct interpretation of contemporary accounts and allowed the analysis of the effectiveness of actions taken on the battlefield.

At the start of the period under consideration the first armies to engage in the English Civil Wars did so in a completely textbook manner, employing long established methods of delivering musket fire. At Edgehill in 1642 it was found that the level of fire generated, although sustainable, was insufficient to force a conclusion in a

firefight between infantry regiments. There was subsequently a very rapid, nationwide change, which appears to have started within weeks of Edgehill, to delivering the infantry's fire in very short, sharp bursts at very close range, followed by an immediate assault. This was found to be a very effective technique against both cavalry and infantry and became used almost to the exclusion of other, earlier ways of delivering fire and meant that infantry could defend themselves against cavalry without resorting to squares or other all round defensive formations.

It is likely that this development owed something to the techniques introduced by Gustavus Adolphus of Sweden in the 1630s, but British infantry developed those techniques and took them to a new level. This development occurred in isolation and was not matched by anything similar in Europe, where the use of this method of fighting by troops from Britain achieved dramatic results. When English armies took to the field in the years immediately after the Civil War they employed this technique against Spanish troops at the Battle of the Dunes in the presence of French allies. After the Restoration of the Monarchy, at Ameixial, they again used it against Spanish troops, this time in the presence of Portuguese allies. The impact on friend and foe alike was considerable and nothing quite like it had been seen before on a European battlefield. It was not, however, adopted by any other European army and there are a number of possible reasons for that. It did not solve the problem of combining effective fire with sustainable fire, which was the real problem. It might simply not have suited the way other armies chose to fight, but it might also be a reflection of the limited influence of Britain and her army in the second half of the

seventeenth century. Chandler describes the British infantry of the 1680s as 'amateur and immature'.⁷⁰⁸

One of the key developments in the way British infantry delivered its firepower occurred in 1689 following the Glorious Revolution and the accession to the thrones of England and Scotland of William III. It has long been assumed that the introduction of platoon firing to British infantry took place in Flanders where the Duke of Marlborough was leading an English contingent as part of a Dutch army. It is now possible to demonstrate that platoon firing was also almost simultaneously introduced to the Scottish Army and to William's English troops campaigning in Ireland. Furthermore the precise form that it took has also now been identified and it is different in many aspects from the form that platoon firing is usually stated as having first taken. For instance, the platoons were not at first organised into firings. The great benefit of this new technique was that it allowed the same organisation and formation to deliver fire in a manner that was both sustainable and effective and at a rate that could easily be controlled. As such it was a perfect development for British infantry with their preference for close range fire followed by an assault and it also proved effective against cavalry.

During the course of the Nine Years War the pike was replaced by the bayonet, the matchlock musket by the firelock or flintlock musket and the cartridge replaced the bandoleer. By the start of the War of Spanish Succession a battalion, now consisting of twelve companies or platoons of hatmen and two platoons of grenadiers, could fire one of its platoons every few seconds and still have the first platoon that fired

⁷⁰⁸ Chandler, *Art of War*, p. 113.

reloaded and ready to fire again by the time all the others had fired. Over the course of half a century the firepower of British infantry had effectively doubled.

If the original form of platoon firing was different from the form that is usually described, it is now possible to say when that more usually recognised form, which organised the platoons into firings, was introduced. It is also possible to demonstrate that it was still not organised quite as is usually described. The introduction of firings took place in Ghent where the British infantry were quartered during the winter of 1706-1707. Organised by Major General Ingoldsby there is some evidence to suggest that the idea had its origins in the Royal Regiment of Ireland. Whatever its exact origins it is clear from manuscript evidence that it did not at first take what might be called the classic form referred to by modern historians in which a battalion formed three firings each of six platoons. In their first form the firings made use of fifteen platoons, six in the first two firings and three in the third. It was this form that was employed in the oft quoted engagement at Malplaquet in 1709 between the two 'rival' Royal Regiments of Ireland in the British and French armies. By the end of the War of Spanish Succession a battalion was forming in fourteen platoons with a first firing of six platoons and the second and third of four platoons. This is the form described in the official drill manual of 1728.⁷⁰⁹ The form with eighteen platoons is just one of the many variations suggested by Humphrey Bland in 1727 and appears in Kane's book of 1745.⁷¹⁰ It only becomes the usual form at the insistence of the Duke of Cumberland in the 1740s. It would appear likely that the misapprehension that Kane described the early form of platoon firing has occurred because Kane's

⁷⁰⁹ *1728 Regulations*, p. 80.

⁷¹⁰ Bland, *Military Discipline*, p. 69; Kane, *Campaigns*, p. 112.

book was a history of the War of Spanish Succession with his views on drill attached. It has been assumed that the drill was of the period of the war whereas it represents the views Kane held in the 1730s.

The organisation of platoons into firings was undoubtedly an effective development, but part of its strength in the form it took at the end of the War of Spanish succession was because each platoon was also a company. This meant that each platoon was of a big enough size for its fire to be effective and that the men were under the command of their own company officers. Subsequently, however, the number of companies was reduced from thirteen to ten, which meant that companies had to be broken up to form platoons. Furthermore, Cumberland insisted not only on the increased number of platoons, but also that officers were posted to platoons by seniority, meaning that men were frequently commanded by officers they did not know. These changes made the management of a battalion's fire a far more complex business and the effectiveness of firings began to be questioned.

Leaving aside these difficulties, however, it is informative to compare the orders given by Montrose for the battle at Tippermuir in 1644 and the remarks made by LaFausille on how the infantry fought at Laffeldt in 1747.⁷¹¹ Although divided by over a century they are, in essence, the same. Both describe defeating the enemy by the close range delivery of fire followed by an immediate assault.

Despite early difficulties with platoon firing at Dettingen, caused by inexperience and a lack of training, it served its purpose well through the rest of the War of Austrian

⁷¹¹ See above, pp. 45-46 for Tippermuir and p. 157 for Laffeldt.

succession. The exceptions were the battles of the Jacobite Rebellion of 1745-1746 when the complexities of firings were not able to cope with the rapidity of the Highland charge. Instead Cumberland reverted to using alternate fire in order to deliver the fire of his battalions more quickly and this was used to devastating effect at Culloden. Against a more conventional enemy the use of standard platoon firings continued to be effective.

By the start of the Seven Years War, however, the adherence to the use of platoon firings was being widely questioned and challenged by officers such as James Wolfe. They were advocating the adoption of the Prussian version of platoon fire, which was simply a version of alternate fire using eight fire units, platoons, companies or sub-divisions. Eventually, following the resignation of Cumberland the British infantry was free to adopt this system and it became part of the official regulations in 1765 after being in widespread use during the Seven Years War. In essence it was little different from the alternate fire in use before 1706, and so raises the possibility that the introduction of firings was a mistake, given that the army subsequently returned to using alternate fire.

Bland spelt out the objection to the early form of alternate fire. As it involved twelve companies, with six companies firing in succession in each wing, an unacceptably broad portion of the front of a battalion could be left unloaded at any time, and thus vulnerable to attack.⁷¹² The advantage of organising the platoons in firings was that the available fire was spread across the whole battalion rather than being concentrated at just one point in each wing. This worked well when platoons were

⁷¹² Bland, *Military Discipline*, pp. 145-47.

whole companies and there were just fourteen platoons. As the number of platoons increased and the number of companies was reduced the whole process became increasingly complex and the firepower of an individual platoon decreased. That there was some recognition of this is clear from Cumberland's introduction of subdivisions comprising two platoons as a fire unit. The advantages of alternate fire by companies over the use of platoons in firings were that it was simpler, companies remained together under their own officers, there was no complex order of firing, and the basic fire unit became larger. Furthermore Bland's objections were no longer valid for two reasons. Firstly, the rate of fire of the infantry had increased dramatically with improved drill, priming from cartridges and steel ramrods, which meant that the companies were unloaded for a shorter time. Secondly, only eight fire units were involved, rather than fourteen, which meant that, proportionately, any unloaded part of a battalion's front was smaller.

Throughout all the changes and argument about the best way to deliver effective fire two things did not change. One was the range, thirty yards or less, at which it was preferred to open fire. The second was the use of the bayonet to finish what firepower had started. Those arguments that did occur were simply about the best way to deliver the fire of a battalion, the doctrinal debates going on in Europe appear to have passed by the British Army with little effect.

There is no doubt that British infantry throughout the period under consideration was largely successful on the battlefield, often against considerable odds. On the few occasions when they were beaten there were often other factors at play and they soon recovered from those setbacks. Examples of this were Prestonpans, against

the Jacobites in 1745, and Monongahela, against irregulars in 1755. This success was largely due to the infantry's efficiency with firelock and bayonet and their adherence to their tactical doctrine. A factor of some importance in achieving this success was the character of the soldiers themselves. The doctrine that they executed required a considerable amount of confidence and the counter-intuitive recognition that it was safer to ignore the fire of the enemy and reserve a battalion's fire until the range was reached at which it would have the most and the quickest effect. They could also display considerable resilience if not down right stubbornness. At both Marston Moor and Naseby royalist infantry put up very stubborn resistance. The battle of Fontenoy may have been a defeat, but the British infantry were not beaten, as French cavalry discovered to their cost. At Monongahela the infantry only broke after three hours when all their ammunition was expended, saying they would fight if they could see their enemy. At Minden the 12th Foot had suffered 302 rank and file killed and wounded out of 480 and 18 officers killed and wounded out of 27 and yet were still prepared to fight.

If the infantry's performance at Dettingen was initially less than ideal it is perhaps not surprising. The last major battle for the British Army had been Malplaquet in 1709, thirty years earlier, and thus the vast majority of the army had never seen action, the small minority who had were senior officers who had been junior officers in 1709. Nonetheless, as the actions and comments of officers like Wolfe make clear, the army was at least familiar with the theory of their doctrine, what they had to do was relearn confidence in it. Relearn because although the techniques for the delivery of an infantry battalion's fire underwent a number of changes between 1642 and 1765 the underlying tactical doctrine did not. This can be summarised as reserving fire

until within a range of thirty yards, then delivering fast and accurate fire to overwhelm the enemy's resolve, before driving them off with a vigorous bayonet charge.

Since this doctrine had lasted and been effective for such a long time the question arises, did it continue after the period covered by this thesis? All the indications are that it did. The work of Spring on the American War of Independence and Nosworthy on the Napoleonic Wars have already been referred to.⁷¹³ The actions of British infantry in stopping and defeating French columns at La Belle Famille and Quebec are precursors to any number of battles in the Peninsular War and Waterloo.

In deed it is worth considering the words of one modern British infantry NCO;

The sight of men jumping out of the Warrior with incoming fire hitting the vehicles yet still no hesitation to go forward is because of the self-belief in their ability, and the knowledge that the only way to stop the incoming fire is to fire back and close with and kill the enemy.

CSM Falconer was writing of his time in Basra in 2004 and yet he expressed an underlying doctrine that would be recognised by any British infantryman from 1642 to 1765. He also wrote about the 'confidence that the soldiers had in the system and themselves.'⁷¹⁴

The long term success of British infantry in combat was the result of the adherence to a simple, but very effective combat doctrine. It was born in the nationwide strife of the English Civil Wars. It was honed and improved in the cockpit of Europe. It was adapted to overcome Scottish Highlanders and North American Indians. Changes in the practices and procedures of its application sought only to improve the delivery

⁷¹³ Spring, *With Zeal and with Bayonets Only*, p. 243-44; Nosworthy, *Battle Tactics of Napoleon*, pp. 227-28.

⁷¹⁴ Richard Holmes, *Dusty Warriors; Modern soldiers at War* (paperback edition, London, 2007), p. 332.

and effectiveness of that doctrine. The professionalism and confidence with which it was applied made Britain's redcoats a force that repeatedly succeeded against numerically superior enemies.

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