

**Examining the Development of Eighteenth-century Military Affairs:
Comparing the Military Writings of Frederick the Great and Maurice de Saxe**

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INTRODUCTION

Eighteenth-century Western Europe marked a turning point in warfare. The innovations in gunpowder technology and army organization in the seventeenth-century allowed militaries to inflict more damage, and employ tactics to accommodate the use of firearms. Western Europe during the eighteenth century is also synonymized with the Enlightenment, which cultivated an emphasis on the arts, literature, as well as general rationalization and secularization of the thought process. This also contributed towards the development in the discourse of military theory – ranging from strategy and tactics, which included logistics, fortification, and order of battle, to the philosophical nature of war itself.

During the course of the eighteenth century, numerous military leaders contributed their views in military affairs, and published numerous works. Among them, Frederick the Great's *Principes généraux de la guerre* were written from a noticeably pragmatic stance, and distributed among his generals as an instruction on conducting military campaigns.¹ His *Testament Politique* contained chapters on military affairs, but was written to address the overall administration of the state, as a guideline for his heirs.² Though some of his battles during the Seven Years' War, such as Kolín were disastrous, his labor in politics and diplomacy did ensure Prussia's survival and ascendance into a great power from the eighteenth century onwards.³ Another influential military leader and thinker who wrote his works around Frederick's time was Marshal Maurice de Saxe, who served the Kingdom of France as a general, and eventually *maréchal*. Saxe was a capable general, most notably during the War of the Austrian Succession, and formulated his thoughts on the art of war in his *Rêveries*, which is interpreted as an intellectual critique typical of the Enlightenment.

Notions of the Enlightenment influenced the outlook on warfare, especially among officers. The gentlemanly ethos and aristocratic background most officers possessed defined the conduct of war during the eighteenth-century. Warfare contains general principles reproduced throughout the ages, in issues such as strategy and morality. Military leaders often display these values through writing or battle, yet each

¹ Palmer, "Frederick, Guibert, Bülow", 96.

² Volz, *Die Politischen Testamente Friedrich's Des Grossen*, IX.

³ Scott, *The Birth of a Great Power System 1740-1815*, 105-107.

period of time or event presents distinct characteristics and trends. The Enlightenment acted as a vessel for military writers to interpret warfare, using newer forms of intellectual engagement. Between the years of 1700 and 1748, there were more than 30 publications on military affairs, followed by 25 from 1748 to 1756.⁴ Again, the number increased to 100 works between the years of 1756 and 1789. The surge in military publications characterized an increasing pattern amongst the military circle, who saw the importance of intellectual discussion in military matters, as a means to formalize the subject of war.

Historian Azar Gat, in *Origins of Military Thought*, traces the phenomenon to the French Enlightenment, where there was a cohesion among the military *philosophes*, in what they wanted to achieve. The influence of the Enlightenment brought together military writers, who otherwise had different views, to explain war into a set of principles and theories. This notion was under the rationale that man could understand, and formulate all of the sciences and disciplines.⁵ Jacques Antoine Hippolyte, Comte de Guibert, another notable military *philosophe*, wrote in his *Essai général de tactique*, “la science de la guerre moderne, en se perfectionnant, en se rapprochant des véritables principes, pourroit donc devenir plus simple et moins difficile.”⁶ The intellectual transformation of military thinking into what we understand today as military science, or military art, also saw the establishment of military academies and colleges throughout the European states, where the transfer of knowledge in military affairs was more institutionalized.

Studies on eighteenth century warfare demonstrate the rigidity with regards to its conventions. The seasons heavily reduced an army’s ability to operate in a theater, and could lose up to one third of its original size during winter.⁷ Wherever an army went, a baggage train drawn by pack animals followed it, and was numerically an army in itself.⁸ The technological developments that began in the sixteenth and seventeenth-century, such as firearms development and tactical organization fully matured in the eighteenth-century,

⁴ Gat, *Origins of Military Thought*, 25.

⁵ Ibid, 27-29.

⁶ Jacques Antoine Hippolyte, Comte de Guibert lived during the latter half of the eighteenth-century, and, like his counterparts, sought to define a clear theoretical principle on the art of war. However, his *Essai* also bridged the relationship between political and military affairs, noting their intertwined nature. The full note is in the bibliography. Guibert, *Essai général de tactique*, 85.

⁷ Archer et al, *World History of Warfare*, 324.

⁸ Ibid, 325.

following the decline in the use of bladed weapons, such as pikes.⁹ Yet the improvements did only so much to improve the pace of war. Linear tactics in battle spread soldiers in long, thin lines to increase the firepower exerted by muskets, but coordinating battalions to advance in formation was difficult, when mounted officers and bugle calls was one of the primary instruments of passing instructions.¹⁰ Logistics and poor infrastructure restrained an army's campaign range and fighting ability. Generals and their armies had to navigate through a landscape dotted with fortifications, as sieges consisted an essential feature of warfare in the eighteenth-century.¹¹

Jeremy Black, a historian who has done extensive work on eighteenth-century political and military affairs, points out that double standards exist in the study of eighteenth-century warfare, and is often compared to the faster and more dynamic "Revolutionary Warfare", which began in the late eighteenth-late century.¹² The comparison then tends to lean toward the association that eighteenth-century warfare was limited in aims and objectives. An example of this examination is made by Robert Palmer. He argues the differences in the political systems, between the dynastic and later "revolutionary" governments defined the characteristics of warfare in both eras, with patriotic fervor replacing the inability of absolute monarchy to wage war. The disconnect between the state and its people, and the limited resources of states stemming from the type of government are just a few among many arguments in favor of this teleological approach.¹³ Such arguments merely touch the surface on military affairs during the eighteenth-century. Geza Perjés provides an alternative view, concluding that the political system was less of a determining feature in the scope of objectives. Moreover, he argued that limitations in the military system itself were unable to fulfill the political objectives, which was equally ambitious in any sense.¹⁴ These included limitations in logistics systems, and the mobility of armies. Both views of eighteenth-century warfare represent the idea that it was the age of "limited warfare", but with differing argumentation.

⁹ Van Creveld, *Technology and War*, 93-95.

¹⁰ Duffy, *The Military Experience in the Age of Reason*, 200-201.

¹¹ Archer et al. *World History of Warfare*, 321-324.

¹² Black, "Eighteenth-Century Warfare Reconsidered", 217.

¹³ Palmer, "Frederick, Guibert, Bülow", 91-93.

¹⁴ Perjés, "Army Provisioning, Logistics and Strategy in the Second Half of the 17th Century", 36.

This thesis aims to compare and contrast the writings of Frederick and Saxe, which may further explain some notions of warfare in the eighteenth-century. It could show that instead of a teleological approach, exploring the works of Frederick and Saxe presents a different view on warfare during the eighteenth-century. War was perceived as an “art”, where theory and human creativity combine into the conduct of war. This would still resonate in the first half of the nineteenth-century, where Carl von Clausewitz, a Prussian military officer and writer stresses this assumption in his work *Vom Kriege*.¹⁵ The significance of military publications in the eighteenth-century is undervalued by those who argue that technological and socio-political change gave better means of fighting war, removing the previous “limitations”. Military developments during the Enlightenment is not often credited as a growth process for a form of war that crystallized in early decades of the nineteenth-century. Of course, technological change does provide improved means of fighting wars, but its role in this case is often exaggerated and misleading.

Selecting the publications of the two military authors for comparison is justified by several reasons. Frederick and Saxe wrote from very different perspectives, for different intentions. Frederick’s *Principes* and *Testament Politique* were essentially official documents, which had a clear, practical purpose: to instruct his generals and successors, respectively. He specifically stated the purpose of his *Principes* was for Prussian use, to counter military threats from surrounding powers: “Je n’écris que pour mes officiers, je ne parle que de ce qui est applicable aux Prussiens, et je n’envisage d’ennemis que nos voisins, ce qui est malheureusement un synonyme.”¹⁶ For Saxe, the *Rêveries*’ contains much more theoretical debates. He stated that “War is a science so obscure and imperfect, [...] no rules of conduct can be given in it.”,¹⁷ implying that Saxe aimed to provide clarity to the nature of war, similar to his counterparts. The *Rêveries* was a critique on the practice of war, and a demonstration of Saxe’s displeasure at some practices he saw as outdated and lacked reasoning. Where Saxe wanted change in how wars were fought, Frederick acted within the limits of the system.

¹⁵ Gat, *Origins of Military Thought*, 177.

¹⁶ Preuss, *Œuvres De Frédéric Le Grand*, XXVIII, 4.

¹⁷ Saxe, *Rêveries*, iii.

Frederick and Saxe commanded their armies after the musket became a universal weapon for infantry, and armies discarded their pikes altogether.¹⁸ Considering how both had battlefield experience and wrote extensively, it is reasonable to explore their opinions on this form of warfare at its early stages. Both were also at different spectrums of military literature of the time. Saxe represents the intellectual scholar of the Enlightenment who explored the theories and what-ifs, whereas Frederick bore the responsibilities of maintaining not only his army, but also his state, which is shown by his practical approach. However, both authors' works address several themes in warfare that represent an enlargement in military thinking the teleological approach does not sufficiently describe. Nonetheless, analyzing the military writings of Frederick and Saxe also enhances the basic understanding that warfare in the eighteenth-century was hindered with constraints related to the military means.

The thesis poses the following question: in what ways can comparing the works of Frederick the Great and Maurice de Saxe help re-interpret the development of military affairs during the eighteenth-century? Initially, Chapter 1 will discuss the lives Frederick and Saxe. It will be worth citing their biographical information, their positions on war, relevance, and other information that can put the topic of discussion of the thesis into context. Chapter 2 is the first area of comparison between the two authors' texts. Both Frederick and Saxe's writings contains passages and chapters that well define tactics and firepower. Despite the challenges Perjés outlined, with regards to the practical limitations, generals were nevertheless determined to decisively fight "fast" battles, and achieve superior mobility. It also demonstrates the technical and theoretical aspect to military thinking, increasing in sophistication. Chapter 3 will concentrate on how both saw the issue of manpower. Recruiting enough men for an army without damaging a states' economy had been a recurring problem for rulers. Both authors elaborate their preferred method of recruiting, and the considerations that underpin such approaches. Moral and sentimental value was also considered by Saxe in his opinion towards recruitment. Lastly, the concluding remarks reiterates the depth of military affairs during the eighteenth-century. It stitches together the discussions, demonstrating

¹⁸ Keegan, *A History of Warfare*, 344.

how the teleological approach lacks the considerations on the progresses within the military realm, and argues that exploring the military writings of the eighteenth-century contributes a larger understanding of eighteenth-century warfare and its developments. The conclusion puts the comparisons of the writers into the larger scope of eighteenth-century warfare, justifying its relevance in the study of the subject.

CHAPTER 1 FREDERICK AND SAXE: A COMPARISON OF TWO MEN

Frederick the Great

After ascending to the Prussian throne in 1740, Frederick the Great ordered his army to enter Silesia in the same year. Taking advantage of the well-drilled army his father had left him, as well as the shaky political circumstances of the newly-crowned Habsburg monarch Maria Theresa, he challenged Habsburg authority, and with success.¹⁹ Though the Prussians emerged victorious against the Austrians at the first battle in Mollwitz, Frederick had fled the battlefield, and both sides committed several tactical errors that resulted in a huge loss of men. *Principes généraux de la guerre* was written in light of the first two of the three Silesian Wars, in 1746.²⁰ The first edition, part of the thirty-volume *Œuvres*, was first written between 1746 and 1747. However, the *Œuvres* themselves were only compiled and published between 1846 and 1856. Frederick's strong intellect, combined with the lessons he drew from the first Silesian campaign had him committed to constantly improve his army's doctrine, by writing instructions and directives, as well as drilling them in maneuvers and marches.²¹ Most of Frederick's substantive works were written in French, which he preferred over his native German. In the introduction to the *Principes*, Frederick expressed his view on the art of war strictly tailored to Prussian use, and his principles should be carried out by his generals at all times: "à vous enfin qui, dans mon absence, devez agir par mes principes."²² Since the chapters in the *Principes* served a practical need to instruct his generals and successors specifically on war, he avoided speculative theories and abstract thoughts: his opinions were always straightforward, and provided concrete solutions for then-present issues. For example, when discussing the role (and placement) of commissaries and magazines, he wrote from his experience in Silesia and Bohemia in establishing proper criteria and instructions.²³ He elaborated:

La première règle est de faire vos amas principaux sur vos derrières, et toujours dans une ville fortifiée [...] Quand on fait son principal magasin devant l'armée, on court risque de

¹⁹ Clark, *Iron Kingdom*, 191-196.

²⁰ Palmer, "Frederick, Guibert, Bülow", 96.

²¹ Citino, *The German Way of War*, 48-49.

²² Preuss, *Œuvres*, XXVIII, 3-4.

²³ *Ibid*, 18-22.

le perdre au premier échec, et l'on est sans ressource; au lieu que, les mettant par échelons, on ne fait pas la guerre en désespéré, et une petite disgrâce n'entraînera pas votre perte totale.²⁴

In addition to the *Principes*, Frederick's *Testament Politique* was first finished in 1752, and the second version written in 1768. The *Testament* was further compiled and published under the title *Die Politischen Testamente Friedrich's Des Grossen*, edited by the German historian Gustav Berthold Volz in 1920. The *Testament* served to address his heir on the issues of ruling over a state, as it was common practice for the Hohenzollern monarchs to leave instructive texts to their heirs. The *Testament* and *Principes* differed in perspective and subject matter. The *Testament* addressed the issue of economics, politics, and military affairs from a ruler's point of view, and concerned the proper governance of the three spheres from a larger scope. His sense of duty that a monarch should fulfill is reflected in his *Testament*, as he wrote: "Le souverain est le premier serviteur de l'État. Il est bien payé, pour qu'il soutienne la dignité de son caractère; mais on demande de lui qu'il travaille efficacement pour le bien de l'État, et qu'il gouverne au moins avec attention les principales affaires."²⁵ The *Testament* does contain a section on military affairs, yet it concerns the larger aspect of organization and administration, with much less emphasis on strategy and tactics. On the other hand, the *Principes* displays a different attitude, as he pragmatically sought to better the army's ability to fight, and address the technical aspect of warfighting from the lens of a general, with a practical aim.²⁶ Frederick did not trust the individual soldier; moreover, he relied on harsh discipline to control what he believed a group of rowdy and indolent people into one, mechanical fighting force. Frederick emphasized the role of discipline in his army:

La plus grande partie d'une armée est composée de gens indolents; si le général n'est sans cesse à leurs trousses, toute cette machine si ingénieuse et si parfaite se détraquera bien vite, et le général n'aura plus qu'en idée une armée bien disciplinée.²⁷

This variance in outlook shows the various layers of Frederick's character, as he presented himself as an "Enlightened monarch", putting himself in the forefront of duty and service towards his subjects. On the

²⁴ Preuss, *Œuvres*, XXVIII, 19.

²⁵ Volz, *Die Politischen Testamente Friedrich's Des Grossen*, 38.

²⁶ Gat, *Origins of Military Thought*, 57.

²⁷ Preuss, *Œuvres*, XXVIII, 6.

other hand, the ideas of the Enlightenment also reflected in his military works, as he sought to address war with theories and principles based on rational thinking and experience. The military writings of Frederick characterize him as a military leader, who was demanding and had high expectations for his officers.

Frederick's campaign in Bohemia during the Seven Years' War (1754-1763) came at a great cost. Surrounded by adversaries, war seemed inevitable if Prussia was to put effort in keeping herself intact. Though he managed to compel the Austrian forces to retreat inside Prague in 1757, an Austrian relief force under Marshall Daun arrived, forcing Frederick to lift the siege on Prague and fight Daun, resulting in his first defeat at the Battle of Kolín.²⁸ In Saxony, Frederick faced better odds. At Rossbach, he managed to outmaneuver the opposing force under the concealment of Janus Hill, and completely surprise the French-led allied forces who were in marching column, with little time to deploy.²⁹ The 20,000 strong Prussian army only lost 169 men, whereas the allied forces lost 5,000 men, and another 5,000 captured.³⁰ For Frederick, the Seven Year's War gave him the experience of the extremities in both victory and defeat at nearly equal intensities. Frederick died in 1786, and his nephew Frederick-William II succeeded the throne.

Maurice de Saxe

Maurice de Saxe (1696-1750) was one of the illegitimate sons of Augustus II of Poland and elector of Saxony (1670-1733). From the age of 12 he began his military service, serving under Eugene of Savoy, though kept out of direct action for a while, to focus on his studies.³¹ Eugene served under the Habsburg crown, and among the wars he fought, he was instrumental in the Austro-Turkish War (1716-1718). Saxe also fought in the war, and participated in the Siege of Belgrade.³² In comparison with Frederick, Saxe had firsthand experience of facing the Ottomans at war, which gave him the opportunity of fighting an enemy who fielded different tactics and equipment. Saxe's experience in the Austro-Turkish war materialized later on, as he recalled how a battalion that fired the first volley was ultimately defeated by a charging Turkish

²⁸ Citino, *The German Way of War*, 69-71.

²⁹ Holmes, *Oxford Companion to Military History*.

³⁰ Citino, *The German Way of War*, 81.

³¹ D'Auvergne, *The Prodigious Marshal*, 24.

³² White, *Marshal of France: The Life and Times of Maurice, Comte de Saxe*, 38-39.

unit: “instantaneously after which, the Turks rushed towards through the smoke, without allowing them a moment’s time to fly, and with their sabres cut the whole to pieces upon the spot”.³³ His particular opinion on firepower and tactics is partly shaped by this observation, and is expressed in the *Rêveries*. Similarly, Saxe observed the lack of discipline in the Turkish soldiers, comparing to how the Gauls were constantly inferior to the Roman legions: “The Turks are now an instance of the same; for it is neither in courage, numbers, nor riches, but in discipline and order, that they are defective.”³⁴

During the early stages of the War of the Austrian Succession (1740-1748), he was given a division of troops. Upon command of the division, he managed to rout an enemy force, and stopped a convoy of barges, presumably containing supplies. Afterwards, the Elector of Bavaria, one of his superiors, complimented him, and said, “It should suffice that you have merited sovereignty; the rank you hold in the French army is superior to the dukedom of Kurland.”, referring to the fact that Saxe sought for the Duchy of Courland,³⁵ but eventually failed to obtain it, after having forced to surrender the duchy to a Russian replacement.³⁶ In 1744 he was given the title Marshal of France, a military distinction that was given to generals for their achievements in battle. Additionally, the title given to Saxe most likely caused controversy within the French elite, as he was German, an illegitimate child of a monarch, and a Protestant – conditions’ that would have traditionally denied him the title.³⁷

Saxe wrote his *Rêveries* in 1732, under a fever. Written in French, one of the earliest editions was posthumously published in 1757, seven years after his death, along with an English translation. Subsequent editions have been published in the mid to late eighteenth-century. Saxe wrote his *Rêveries* in thirteen nights, and dismissed the seriousness of his work: “I composed this work in thirteen nights. Being sick to the point of fever, I must be forgiven the want of regularity and arrangement and faults of style. I write in military fashion and to dissipate my ennui.”³⁸ However, it was common for authors at his time to dismiss

³³ Saxe, *Rêveries*, 21.

³⁴ *Ibid*, 47.

³⁵ White, *Marshal of France: The Life and Times of Maurice, Comte de Saxe*, 200.

³⁶ *Ibid*, 69

³⁷ *Ibid*, 134.

³⁸ D’Auvergne, *The Prodigious Marshal*, 169.

their writings as casual scribbles.³⁹ But why did he really write it? Was it really just for entertainment purposes? The extent of the seriousness and intentions the *Rêveries* is unclear, in comparison to Frederick's works. Despite containing in-depth critiques and analyses, the intended audience of Saxe's work is open to debate, as he died before ever given the opportunity to implement his ideas in real life. Saxe wrote from a position that allowed him to explore his creative boundaries, and at the same time entertain himself and the potential audiences of his *Rêveries*. There is also the possibility that even if he was unable to fulfill the contents of his work, he could have wished that the ideas in the *Rêveries* are recognized in the future. The amount of detail Saxe addressed in the *Rêveries* goes beyond the discussion of strategy, tactics, and other sublime concepts of war. The first section demonstrates Saxe's ideal army, and precisely dictates how the uniform should be designed. Saxe's reasoning was that, "Our dress is not only expensive, but inconvenient...the love of appearance prevails over the regards due to health, which is one of the grand points demanding our attention."⁴⁰ Even with his modest and trivial attitude towards his "casual scribbles", the ideas he presented were well-grounded with reasoned thought, displaying a vast wealth of knowledge, based on experience and intellectual capacity.

Essentially, the *Rêveries* is a military treatise that aims to address the nature of war, intellectually challenge some of the practices of war, as well as incorporate ideals from the past. For example, he was displeased at the order of placing infantry and cavalry at the center and wings, respectively. Saxe supported the idea of infantry and cavalry working closely as a unit, citing the organization of Roman legions as an example.⁴¹ He proposed the army to be organized into "legions", in a combination of infantry, cavalry, and artillery, arranging them in as a cohesive unit in battle, in contrast with the separate organization of infantry and cavalry a typical army would have.⁴² Along with other military thinkers such as Marquis de Puysegur,

³⁹ Gat, *Origins of Military Thought*, 31.

⁴⁰ Saxe, *Reveries*, 4

⁴¹ *Ibid*, 64.

⁴² *Ibid*, 24-32.

Saxe himself was supportive of the notion that “the art of war was also susceptible to systematic formulation, based on rules and principles...”⁴³ In the introduction, Saxe stated:

There has been a gradual decline amongst us; which must be imputed to our having blindly adopted maxims, without any examination of the principles on which they were founded; from whence proceeds that confusion of customs, where everyone has assumed the privilege of adding, or diminishing at pleasure.⁴⁴

Saxe contended that the military maxims at the time were practiced without any substantial insight, rendering such doctrines into rigid customs. The equilibrium in military technology, strategy, and tactics between armies had generals more inclined to follow established and proven maxims. Saxe’s stance in the discourse was typical of the “salon” *philosophe* of the Enlightenment. He believed that warfare could be quantified and rationalized into definitive principles and theories.⁴⁵ He presents an analogy of the importance in grasping a discipline’s theories and reasoning:

A person who has a taste for architecture, and can design, will draw the plan of a palace with great correctness; but if he is obliged to execute it, and is, at the same time, ignorant of the method of shaping his materials, and laying his foundation, the whole fabric must presently fall to ruin.⁴⁶

The introduction to the *Rêveries* already demonstrates the differences between Saxe and Frederick’s approach. In comparison to Frederick, Saxe was much stronger in expressing discontent towards aspects of warfare in the eighteenth-century, as he theoretically dissected the principles and norms of conducting warfare in the eighteenth-century. Though the *Rêveries* was an intellectual criticism on warfare, Saxe also addressed practical issues and solutions in the first section. He proposed that each soldier should be equipped with his own personal sack to store all the forage and other personal effects as a means to ease the army’s reliance on long baggage trains.⁴⁷

Frederick the Great and Maurice de Saxe took different approaches in perceiving warfare. Frederick, given the well-drilled Prussian army, focused on stretching the limits of what his army could achieve using discipline and training. The speed at which the Prussian army could march, advance, and fire

⁴³ Gat, *Origins of Military Thought*, 29.

⁴⁴ Saxe, *Rêveries*, iv.

⁴⁵ Gat, *Origins of Military Thought*, 27.

⁴⁶ Saxe, *Rêveries*, vii.

⁴⁷ *Ibid*, 51-52.

allowed him to achieve the upper hand during campaigns. His instructions and directives such as the *Principes* outlined the procedures of executing actions, such as the type of maneuvers to employ in certain situations. Frederick also chose not to commit much in attempting to philosophically define the art of war; he presented practical ideas. Moreover, his military writings consisted more on military principles and maxims instead of intellectual debate. In addition, his *Testament* display the images of a benevolent monarch, whose duty was to serve the state and its subjects. On the other hand, the *Rêveries* of Saxe reflects the speculation and deliberation of a *philosophe* in the Enlightenment. Saxe searched for the weaknesses in the state of warfare during the eighteenth-century, and applied reasoned criticism and methods in discussing his findings. He took into account the slow-paced nature of sieges and battles from his own experience, and proposed changes to some aspects of the military system at a larger scale, such as his legions, and the role of fortifications. Nevertheless, Frederick and Saxe contribute, from their purposes and intentions of writing, as well as their approaches, the differing angles on military thought during the eighteenth-century.

CHAPTER 2 PRACTICAL CHALLENGES, TACTICS AND FIREPOWER

The texts written by Frederick and Saxe allow for contrasts to be drawn in varying degrees. Among them, tactics and firepower are discussed by both authors. Moreover, marching and advancing in battle are presented at length by both men, which provide a unique view in the order of battle during the eighteenth-century. It is beneficial to outline some of the practical challenges that generals in the eighteenth-century would have faced, as the tactics employed during the eighteenth-century were also used to address the challenges, with regards to movement in particular.

Challenges of Eighteenth-century Warfare

Historian Géza Perjés describes the crisis of strategy that seventeenth and eighteenth-century armies faced. For armies to move from marching formation to battle formation required considerable time and effort, a fact Frederick and Saxe discussed by length in their texts.⁴⁸ The number of armies in a theater increased this difficulty. The army marched in columns, and changed into line formation before battle, in order to disperse larger volleys of musket fire.⁴⁹ This caused delay in an army's transition to battle formation, and made it easier for an enemy force to notice the movement. Thus, more leeway was granted in either choosing to face battle, or simply to keep marching until suitable ground or time was found to be more advantageous for the enemy force.⁵⁰ Jamel Ostwald used the Duke of Marlborough's campaign in the Low Countries during the War of the Spanish Succession as a case study. It was difficult for opposing armies to commit into pitched battle, since armies constantly marched to find tactically favorable positions, and the time it took for armies to change into battle formation decreased the chances of pitched battle even more. Ostwald describes that despite the Duke's determination to confront the French in an open battle, Villeroi, the French general, kept maneuvering into easily-defendable positions, and denied the chance of facing the Duke of Marlborough in battle for some time.⁵¹

⁴⁸ Perjés, "Army Provisioning, Logistics and Strategy in the Second Half of the 17th Century", 35-36.

⁴⁹ Duffy, *The Military Experience in the Age of Reason*, 201-202.

⁵⁰ Ostwald, "The "Decisive" Battles of Ramillies, 1706: Prerequisites for Decisiveness in Early Modern Warfare", 657-663.

⁵¹ *Ibid*, 661-662.

Logistics too, presented its obstacles. When intending to launch a campaign, armies had to take into consideration the time of year, since man and beast required food for sustenance, including barley, wheat, fodder for horses etc., which needed careful planning in advance, so as to not commit too much troops when marching across the countryside and run the risk of shortage in supplies. Armies also relied on supply magazines for their logistical requirements, and it was ill-advised to conduct marches far from these magazines.⁵² Saxe calculated that a single campaign may reduce the strength of an army to one third and one half of its original strength. Winter months were spent to harass the enemy using smaller forces, and the full force was fully committed during spring and summer.⁵³ The relationship between the population density of a theatre of war and its ability to provide bread for the soldiers in the given area, should an army solely rely on grain supplies found in the immediate surroundings in its theatre of war. If the daily requirements of an army 60,000 strong was 675 q of grain, and a population density as low as 10 per sq. km may theoretically provide 18,000 q of grain six months after harvest, for an army to bake its bread and feed all the men, almost a month's supply.⁵⁴ Technical problems related to the procurement and processing of grain supplies into edible bread. If the said army was to bake bread on the spot for its daily rations alone, the process of milling required 135 mills to process the 675 q of grain, and the baking process required sufficient amount of bricks, firewood, and ovens to be able to bake the daily amounts, in addition to the transportation of these items, as well as the time needed to complete the cycle.⁵⁵

Tactics and Firepower

For tactical advantage, Frederick relied on practicing drill and maneuver exercises in order for his infantry and cavalry to be more efficient in advancing and listening to commands.⁵⁶ Frederick also expected his infantry to be proactive in advancing, hoping to intimidate and yield the enemy of his ground. He wrote

⁵² Perjés, “Army Provisioning, Logistics and Strategy in the Second Half of the 17th Century”, 20.

⁵³ Saxe, *Réveries*, 93.

⁵⁴ Assuming a ratio of 3:4, 0.75 kg of flour from the grain was needed to produce 1 kg of bread, and that 1 q is equal to 100 kg in this case. Perjés’ article mentions that per-capita requirement of bread was 3.5 q, or 350 kg, per annum. See Perjés, “Army Provisioning, Logistics and Strategy in the Second Half of the 17th Century”, 5-6.

⁵⁵ *Ibid*, 8-11.

⁵⁶ Volz, *Die Politischen Testamente Friedrich's Des Grossen*, 148.

in his instructions that “The most certain way to insure victory is to march boldly and in order against the enemy, always endeavoring to win ground.”⁵⁷ With regards to marching order, Frederick dedicated one section for types of marches that should be employed in every scenario conceivable. This ranges from marching parallel close to the enemy, and enable the army to deploy easily, to an “ordinary” march far from the enemy, which aims to secure the roads leading to the next campsite.⁵⁸ The emphasis of moving quickly, and arranging the army into battle formation is highlighted. For example, when marching into a potential battle, Frederick insisted that all baggage should be offloaded, and brought to the nearest settlement or encampment: “Quand on marche à l'ennemi à l'intention d'engager une affaire, on se débarrasse de tout son bagage, qu'on envoie sous une escorte à la ville la plus voisine”.⁵⁹ On a larger, strategic scale, it was also made clear that long wars for Prussia would deteriorate both his army and his state, considering the smaller population and resources available to Prussia compared with the major European powers. He wrote:

J'ajoute à ces maximes que nos guerres doivent être courtes et vives. Il ne nous convient pas du tout de traîner les choses en longueur. Une guerre de durée détruirait insensiblement notre admirable discipline; elle dépeuplerait le pays, et épuiserait nos ressources.⁶⁰

Frederick emphasized the need to maximize firepower – that is the ability to fire and load muskets at a faster rate than other armies, at a rate of five to six rounds per minute.⁶¹ Initially, the *Principes* dictated that firepower was for the defense, and that bayonets should be used in offensives: “notre infanterie est également bien partout; elle a le feu pour défensive, et la baïonnette pour offensive.”⁶² However, in the *Testaments* of 1768, Frederick was more supportive on using firepower, and the ability load faster in order to overwhelm the enemy, as he stated, “Les batailles se gagnent par la supériorité du feu... l'infanterie qui charge le plus vite, l'emportera sans contredit sur celle qui charge plus lentement.”⁶³ Frederick justified this through his experience in the battles of Rossbach and Torgau, though both battles, especially Rossbach

⁵⁷ Luvaas, *Frederick the Great on the Art of War*, 144.

⁵⁸ Preuss, *Œuvres De Frédéric Le Grand*, XXVIII, 57-60.

⁵⁹ *Ibid*, 60.

⁶⁰ *Ibid*, 95.

⁶¹ Archer et al., *World History of Warfare*, 351.

⁶² Preuss, *Œuvres De Frédéric Le Grand*, XXVIII, 29.

⁶³ Volz, *Die Politischen Testamente Friedrich's Des Grossen*, 148.

were won through the Prussian army's maneuver into catching the allied forces by surprise.⁶⁴ However, what Frederick most likely highlighted was the firing speed of his infantry battalions at the pinned allied columns, at which seven battalions did most of the firing, and some units did not receive the chance to fire at all.⁶⁵

For Saxe, speed and mobility were equally important as they were to Frederick, and his *Rêveries* addressed such issues with the proposed legions he asserted, or with any other order of battle. The legion itself consisted of four regiments, with each regiment containing four centuries of infantry, and each century possessing half centuries of light footmen and cavalry in addition to infantry.⁶⁶ At the lowest level, a century consisted of 10 companies with approximately 15 men each. Furthermore, artillery was also included in the legions. The infantry in Saxe's legions were arranged in a depth of four men. They were to be armed with a musket and a pike in the two rear lines, and the two front ranks armed with a musket. The composition of the legions allowed an army to obtain more flexibility on the battlefield. Saxe made clear that the legions could be detached in order to fulfill a specific set of objectives:

...if the commander in chief of an army wants to take possession of some post; to obstruct the enemy in their projects; or, in short, to execute any of those various enterprises... he has nothing more to do, than to detach some particular legion upon it; which, as it is furnished with every material...⁶⁷

Since the legion consisted of infantry, cavalry, and artillery, the subordinate units can be detached and perform specific tasks that might require all three arms, allowing more independence and in achieving tactical objectives.

Saxe's disposition on tactics and firepower is also expressed in general, regardless of his legions. In relation to movement, Saxe noted the lack of discipline in marching, and assumes that not many knew the purpose of marching into battle, regarding it simply as ritual: "without knowing the purpose or true use of it, and as universally believed, that the sound (of the marching beat) is intended for nothing more than a

⁶⁴ Citino, *The German Way of War*, 82.

⁶⁵ Citino, *The German Way of War*, 81.

⁶⁶ Saxe, *Rêveries*, 24.

⁶⁷ *Ibid*, 40

warlike ornament.”⁶⁸ Additionally, Saxe observed the lack of unison and organization in marching during his time, in that individual soldiers’ pace were not synchronized when marching in formation. This caused significant congestion when a change of pace or direction occurred. Thus, Saxe opted for soldiers to march in cadence, in which not only the formation was observed, but also the harmonization of the pace in each soldier’s march: “The way to obviate these inconveniences (of the congestion in marches)...is nothing more than to march in cadence”.⁶⁹

In firepower, Saxe expressed a specific focus in the use of muskets in an army. If Frederick assumed that the army who loads and fire the most rounds prevails, Saxe took a different approach. Instead, he compared two supposed battalions facing each other: “the one that gives its fire in advancing; or the other, that reserves it; men of any experience will, with great reason, give it in favour of the latter”.⁷⁰ By conceding the first volley to the enemy, a line of infantry can advance forward without worrying of another volley while the opposing force reloads, and in closer range, can engage the enemy using the bayonet. This is otherwise known as shock tactics, as it aims to cause psychological unease with an offensive charge. In this case, the battalion which fired the first volley would be preoccupied with reloading their muskets and a charging enemy, increasing the chances of disintegrating the formation. Saxe also expressed a distrust of firearms’ reliability: “I have seen whole vollies fired, without even killing 4 men”.⁷¹ As mentioned in the previous chapter, Saxe saw action against the Ottoman forces, which naturally fought with different tactics and organizations in comparison to the European armies. However, the charge of the Ottomans at Belgrade convinced him that shock tactics were superior vis-à-vis the muskets at the time.

Despite his proposals for reintroducing the old-fashioned pike as a weapon in the battlefield, Saxe displayed the need for flexibility, in having a wider range of equipment and formations to respond to different types of situations in battle. In comparison to Frederick, his *Principes* and *Testaments*, the ideas presented in the *Rêveries*, such as the legion were more original, as Saxe attempted to address the practice

⁶⁸ Ibid, 15.

⁶⁹ Saxe, *Rêveries*, 16.

⁷⁰ Ibid, 19.

⁷¹ Ibid, 20.

of warfare of his age, using his models and approach that are accompanied with intellectual reasoning.⁷² Apart from theoretical discussion, the *Rêveries* also includes analysis on practical issues, such the use of shock tactics. Yet again, these considerations were backed by in-depth reasoning that Saxe provides throughout his work. On the contrary, Frederick's aim in his military writings was to effectively provide military solutions for his army, under conventional means.⁷³ In other words, he aimed to perfect the methods the Prussian army followed, in order to conduct military operations with much more efficacy and precision.

What the comparisons between the thoughts of Frederick and Saxe have shown were the differences in how they saw tactics and firepower. Moreover, the crisis of strategy Géza Perjés' elaborated constrained the time and space of campaign theatres. The difficulty of moving into battle formation for armies, combined with other challenges such as supply management and the abundance of fortresses in the countryside created tactical and strategic obstacles for generals and their armies.⁷⁴ A key comparison would be on the author's opinion of firepower. Saxe was less supportive in using musket skills, and preferred the reliability of shock tactics to break enemy lines. On the contrary, Frederick was comfortable in keeping the musket as an offensive tool, relying on the superior loading skill of his army. Such observations provide relevance as to rigidity of linear tactics, and how both attempted to overcome the limitations of the convention. By looking at what Frederick and Saxe' positions on tactics and firepower, it seems clear that both addressed these practical challenges. Though Frederick and Saxe might have not labeled the above mentioned as "limitations", both would have been certainly influenced by either the factors.

⁷² Gat, *Origins of Military Thought*, 33.

⁷³ Luvaas, *Frederick the Great on the Art of War*, 19.

⁷⁴ Perjés, "Army Provisioning, Logistics and Strategy in the Second Half of the 17th Century", 44-56.

CHAPTER 3 CHANGES IN THE SOURCES OF MANPOWER

Beginning in the late seventeenth-century, the process of recruiting an army underwent a shift. Before, military entrepreneurs and other businessmen with vested interests played an important role in covering the costs of raising, training, and maintaining a regiment.⁷⁵ However, armies in the eighteenth-century, while still relied on entrepreneurs for a portion of their supplies during campaign. The English merchant Sir Solomon Medina supplied the Duke of Marlborough's provisions during the War of the Spanish Succession.⁷⁶ Nonetheless, at the turn of the century, western European states became more inclined to bypass these entrepreneurs and intermediaries, preferring to raise armies with their own resources and administration, with most of the officers involved in the recruitment process.⁷⁷ In the case of Prussia, Frederick the Great's father, Frederick-William I influenced the landowning class of Prussia, or *Junkers*, demanding the men from these families to serve in the Prussian army as officers, and prohibit them from serving or even travelling abroad.⁷⁸ In other words, the eighteenth-century saw a shift in how states recruited their soldiers.

Voluntary recruiting was also present during this time, as some officers and their NCO's, or Non-Commissioned Officers would form recruiting parties, and travel to convince the common folk to join. Essentially, NCO's enforced the orders and commands of the officers in a unit, for the soldiers to follow them. Deceptive means were employed to coerce men into service, as cases in the German states show, wedding parties and church services were held hostage, with recruiters finding able-bodied men in these settings.⁷⁹ On the other hand, armies also consisted professional soldiers under contract, as well as others who were motivated by economic or sentimental reasons. Frederick stated that "Nos régiments sont composés la moitié de citoyens, et l'autre moitié de mercenaires..."⁸⁰, underlining the diverse composition

⁷⁵ Parrot, "From military enterprise to standing armies: war, state, and society in Western Europe, 1600-1700.", 74-80.

⁷⁶ Van Creveld, *Supplying War*, 30.

⁷⁷ Anderson, *War and Society in Europe of the Old Regime*, 111-113.

⁷⁸ *Ibid*, 115-116.

⁷⁹ Duffy, *The Military Experience in the Age of Reason*, 90.

⁸⁰ Preuss, *Œuvres De Frédéric Le Grand*, XXVIII, 5.

of an army, with regards to their origins and motivations. Nonetheless, the soldiers developed a sense of pride and belonging to the armies they served. An example being the resentment between Prussian and Saxon forces, after the Prussian cavalry decimated the Saxon infantry at the battle of Hohenfriedberg (1745).⁸¹

Frederick and Saxe display their views on the sources of military manpower. This discussion also entails the nature of recruitment, including conscription, and some of the issues that come with it. The compromise between the use of Prussian males for economic productivity and as a source of manpower for his army forms a predicament that Frederick expressed in his writings, whereas Saxe was mainly concerned with the moral reasoning behind the nature of recruiting during the eighteenth-century. Furthermore, Saxe proposed his own ideas in finding a sustainable mode of manpower for an army.

Among the European states, Prussia implemented a system of conscription. The whole state was divided into districts called cantons, each consisting of 5,000 men available for duty. Initially introduced by Frederick-William I in 1732, the canton system allowed many exemptions for a number of people, and service usually lasted only two months a year.⁸² The 1768 version of the *Testaments* distinguished the role of cantons during war and peace. With Prussia having a smaller population base compared to the other European powers, balancing the sources of manpower for army recruitment was important, in order to avoid draining the local economies of the cantons. During peacetime, Frederick minimized the number of men that would perform the two-month rotations. Citing the number of men at productive age at approximately one million, he wrote:

Si nous ne voulions composer l'armée que de nationaux, il faudrait défalquer 160,000 hommes de ce million, ce qui serait hors de toute proportion. De la manière que les choses sont arrangées, le pays ne fournit qu'en tout à l'armée 70,000 hommes. Cette proportion est forte, mais elle est tolerable.⁸³

As a result, at almost any given time during Frederick's rule, half of the army consisted of foreigners recruited through various means, either voluntarily or through impressment. Desertion was a key concern

⁸¹ Duffy, *The Military Experience in the Age of Reason*, 8.

⁸² Ibid, 92.

⁸³ Volz, *Die Politischen Testamente Friedrich's Des Grossen*, 139.

for Frederick, as the lack of attachment to the state amongst the foreigners increased the chances of desertion, at a risk of punishment if caught.⁸⁴ Compared to the cantonal recruits, the foreigners had significantly longer contracts. The role of the cantons during wartime was to replenish any regiments that were understrength, as this was outlined in the *Testament* of 1768: “Les cantons rendent les régiments immortels, parcequ'ils réparent leurs pertes sans cesse.”⁸⁵ However, Frederick was reluctant on using the cantons to fully replenish his army, and reserved it for the last resort: “Il faut ménager ces hommes utiles et laborieux comme la prunelle de l'œil et, en temps de guerre, ne tirer des recrues du pays que lorsque la dernière nécessité y contraint.”⁸⁶ In comparison to the *Testament* of 1752, the 1768 *Testament* was written after the Seven Years War, which cost greatly to the Prussian economy. During this point, Frederick was preoccupied with the recovery of the Prussian economy, and concentrated on building more infrastructure and revitalize the industrial base.⁸⁷

For Saxe, the sources of manpower are described in the first article of the *Rêveries*. Like Frederick, Saxe was also concerned with desertion, and forms an important point in his approach to recruitment. Saxe morally objected the recruitment of soldiers through deceptive means, and also saw it as ineffective because of the increased possibility of desertion: “neither is the service benefited by those unlawful proceedings, for sensible of the hardship imposed upon them, they seize the first opportunity to leave it...”⁸⁸ Rather, to secure a steady stream of recruits for the army, the *Rêveries* proposed that military service be enforced by law. Saxe's rationale was that “In course of time, every one would regard it as an honor rather than a duty, to perform his task;”⁸⁹ As such, Saxe's proposal was to implement conscription for a period of five years, for males between the ages of twenty and thirty. Though polities have long since practiced some form of mandatory military service, Saxe's reasoning for encouraging conscription also lies within the role of society of a state and its obligation to defend its interests: “it is both natural and just for people to be engaged

⁸⁴ Preuss, *Œuvres De Frédéric Le Grand*, XXVIII, 5.

⁸⁵ Volz, *Die Politischen Testamente Friedrich's Des Grossen*, 140.

⁸⁶ Ibid.

⁸⁷ Kyte, "Frederick the Great and the Development of the Prussian Army", 30-31.

⁸⁸ Saxe, *Rêveries*, 1.

⁸⁹ Ibid, 2.

in the defence of that state of which they constitute a part”.⁹⁰ Saxe has an ideal perspective in the egalitarian sense, and proposed that within the conscription any degree of class and hierarchy in the treatment of the recruits removed. He predicts that if the abolishment of elitism would have:

Every man at length esteems it an honor to serve his term: the poor would be comforted by the example of the rich (who oblige to conscription); and the rich could not with decency complain, seeing themselves on a footing with the nobles.⁹¹

Saxe observed the practical issue and conscription and how it would alleviate the constraints of recruiting men through coercion, and also ensure a reliable flow of recruits. However, he accentuates the relationship between society and war, to which the latter he considers an “honorable profession”. Saxe implied an army that consisted of a state’s citizens performed better than an army with foreigners, comparing them to the Roman Legions, as it consisted of Roman citizens. He criticized the fact that soldiers at the time mostly consisted of the lowest levels of productive society, “which is collected, to compose the soldiery: but such measures, and such men, are different from those, by means of which the Romans conquered the universe.”⁹²

The comparison on the ideal sources manpower between Frederick and Saxe reveals interesting contrasts in their perspectives. Frederick, in the *Testament*, considered the economic repercussions of having an army that solely consisted of Prussia citizens, and maintained the equal ratio of foreigners and Prussians. Frederick also believed that the cantons should be used as a last measure when replenishing men during wars, as he risked losing a portion of the Prussian workforce. It was a common belief until the latter half of the eighteenth-century that armies should consist of the least productive individuals, which included criminals, vagabonds, and other unemployed persons.⁹³ In Frederick’s perspective, the cantons were purely practical purposes, and he did not attempt to instill any sense of patriotism and duty to it. On the contrary, Saxe’s rationale of state-enforced conscription allowed practical means of retaining a standing army, but also touched upon the philosophical values of having such a system. The notion of equal treatment was

⁹⁰ Saxe, *Rêveries*, 2.

⁹¹ *Ibid.*

⁹² *Ibid.*, 3.

⁹³ Anderson, *War and Society in Europe of the Old Regime*, 163.

propelled by Saxe in his idea for conscription. Saxe also believed in society's proactive role in promoting the states interests through armed means, at least for those who are obliged. This would fully materialize later on during the Napoleonic wars.

CONCLUSION

The thesis has explored the writings of Frederick the Great and Maurice de Saxe, and in turn provide interesting perspectives on the development of military affairs during the eighteenth-century. These progressions in military affairs range from the opinions of both authors in tactics, firepower, and the sources of manpower. It shows the limitations of eighteenth-century warfare in terms of its practicality and rigid conventions, particularly in an army's campaign. Additionally, what the comparisons of the two author-generals also produce, is the growth of military thinking through the writings that put the eighteenth-century in a focal point that influenced military affairs in the subsequent centuries. The teleological approach to warfare during the eighteenth-century, and its comparison to nineteenth-century warfare does provide a valid point in attributing the role of the political system in determining warfare. However, it lacks the depth that the military writings signify. The works of Frederick and Saxe demonstrate the cultivation of war into a formalized study and subject that subsequent military leaders up until the present day perceive.

The comparison of Frederick and Saxe on tactics and firepower exhibit the limitations of warfare in the eighteenth-century. It also shows how both addressed these issues from different positions, in attempting to use practical and theoretical solutions to overcome these constraints. Differences in the preference of firepower are clearly seen, and is one of the examples of overcoming the limits of linear warfare. The limitations of war are clearly defined, and show that it stemmed from a military system that was unable to deliver conclusive results. Nonetheless, it also meant that military leaders were determined to wage decisive wars, as the *Principes* and *Rêveries* outline. The question of decisiveness and determination is asked of warfare in the eighteenth-century. However, the determination of military leaders such as Frederick has proven that eighteenth-century battles can be decisive, despite the challenges they faced.

The third chapter looked at the two authors perspectives on the sources of manpower and recruiting. Comparing and contrasting the opinions between Frederick and Saxe show the developments of military thinking that enlarged, with regards to the addition of recruitment as an institutionalized process that

demanded more attention. However, it also demonstrates the change in the composition of armies. Who should serve in the army? Is it better to fully compose the army of a state's own citizens, or foreigners? These questions are partly answered by Frederick and Saxe, and during their active period European militaries were gradually transforming their methods of recruitment, until the nineteenth-century. These trends of finding a source of manpower well describes the eighteenth-century as a period where the institutionalization of the armed forces within state control was maturing, and dispels the argument that the dynastic system of government hindered the state's ability to use its resources.

In answering the research question, the development of military affairs during eighteenth-century was greatly propelled by military publications and their authors. With evidence from secondary sources on the conduct of war, analyzing the military works of the eighteenth-century can help re-interpret our understanding in the development of military affairs. Under the Enlightenment, military authors collectively possessed a rationale to define warfare, and publish their works in such as a short timespan among each other. Moreover, not only did the amount of published works pose a significance, but the varying perspectives of these authors reveal the degree of activity in this field. Frederick and Saxe represent a fraction of this diversity; in what they wrote, why they wrote, and how they wrote. These two authors, along with many others such as Guibert clearly defined their interpretations of war, with principles and other assessments that carried with it logic and rationality.

The depth of scope in eighteenth-century warfare, along with the military thinking demonstrates that arguing how eighteenth-century warfare was constrained by the dynastic system of politics is insufficient. The sense that eighteenth-century was a time of "limited warfare" produces several explanations. That eighteenth-century warfare was limited in aims and objectives, influenced by the forces of dynastic political systems is faulty. Additionally, comparing the warfare of eighteenth-century to the newer forms of warfare found during the revolutionary and Napoleonic era naturally brings the perception that eighteenth-century warfare is primitive and "limited". If it is so, then what is to be concluded of the military writings? Are the developments in military thinking limited by the socio-political structures as well? This research explored the features of eighteenth-century warfare, and finds that there is a wealth of

issues and themes that can be further discussed. What is certain was that the means to carry out military operations were constrained by limitations in the military system of the time, such as the organization of armies, their logistical systems, and the reliance on supply magazines. The parity in technological capabilities among most of the European powers also becomes a contributing element in the crisis of strategy argued by Perjés. Furthermore, the research demonstrates the various activities in the realm of military thought. The growing number of military thinkers publishing their works, and attempting to formalize warfare into a study of its own shows the innovations of military thought from the previous centuries. As a result, it is questionable to label eighteenth-century warfare as “dynastic”, or “limited” in nature. The comparison of eighteenth-century warfare as inferior to warfare in the nineteenth-century based on the forces of ideologies and social factors provides limited answers. Considering the practical limitations of the eighteenth-century military system, as well as looking into relevant military writings of the time provides more relevant explanations.

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