

**CLAUS TELP**

**THE EVOLUTION OF  
OPERATIONAL ART  
1740–1813**

**From Frederick the Great to Napoleon**

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# THE EVOLUTION OF OPERATIONAL ART, 1740–1813

The term 'operational art', coined by Soviet military theorists in the interwar period, received increased attention in military circles with the debate on comparative NATO and Warsaw Pact operational capabilities during the 1970s and 1980s. This interest also extended into the field of military history when the origins of operational art became the object of research. Generally, operational art is considered to be a corollary of the Industrial Revolution, manifesting itself in the campaigns of the German military thinker Helmuth von Moltke and those of the American Civil War. Was the evolution of operational art indeed a concomitant of technological change, or did it antedate the major inventions of the Industrial Revolution such as the railway and the telegraph? This book makes the case that operational art emerged in the period from the campaigns of Frederick the Great to the end of the Napoleonic Wars as a result of three dynamic interrelationships or dialectics. First, the interplay between military and non-military factors, such as social, economic, and political developments; second, the interplay between military theory and practice; and, third, the interplay between developments in France and in Prussia in military theory and practice.

This well-researched book will be of much interest to students of military history and strategic theory, as well as to students of European history in general.

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From Frederick the Great to Napoleon

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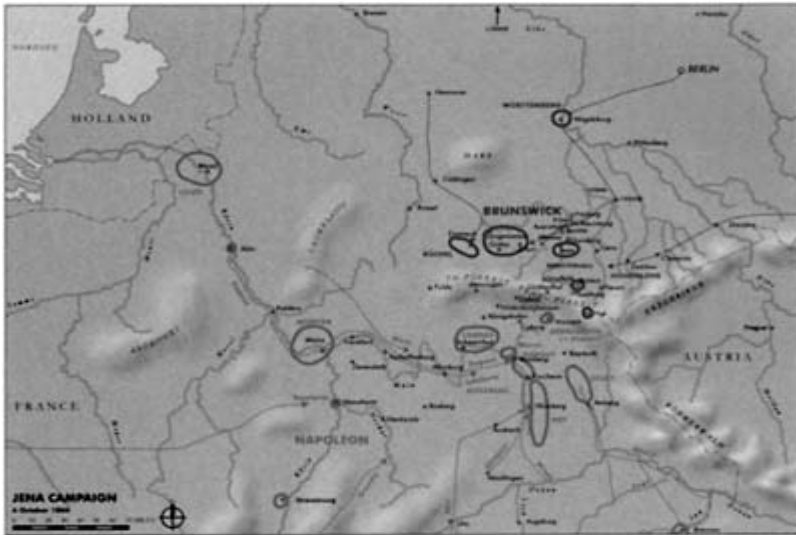
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Since I could not have completed my studies without the generous moral as well as material support of my parents, this work is dedicated to them.



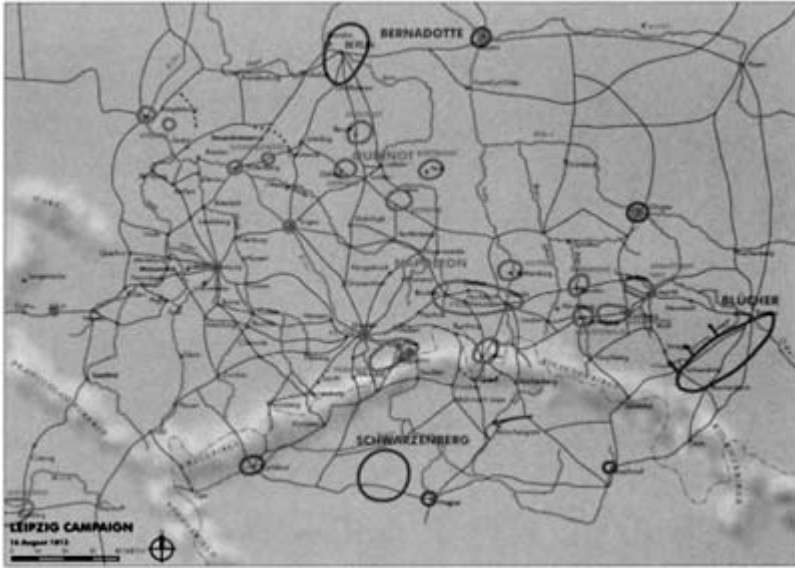
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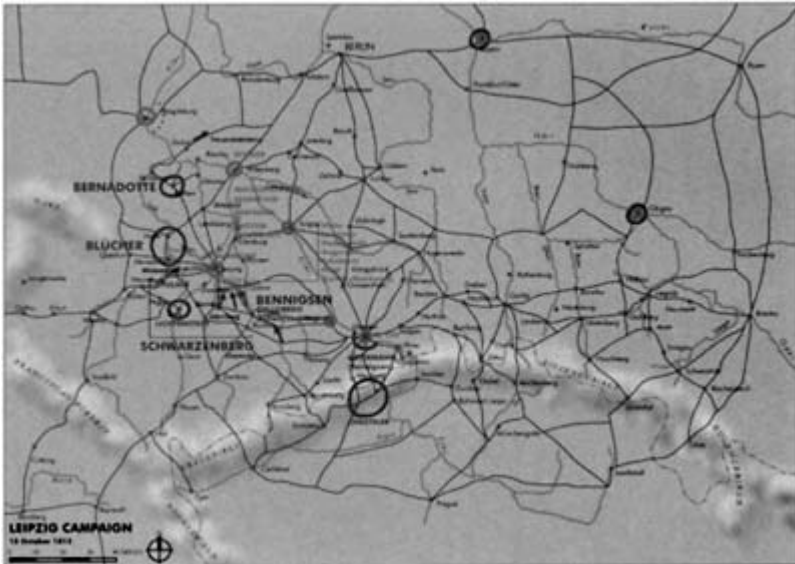
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# INTRODUCTION

The term ‘operational art’, coined by Soviet military theorists in the interwar period, has received increased attention in military circles with the debate on comparative NATO (North Atlantic Treaty Organization) and Warsaw Pact operational capabilities during the 1970s and 1980s.<sup>1</sup> The interest in operational art also extended into the field of military history when the origins of operational art became the object of research. Some historians maintained that operational art first emerged in the American Civil War and Moltke’s campaigns in 1866 and 1870–1871 as a child of the Industrial Revolution. Proponents of this position hold that the invention of rifled guns and infantry arms, the railway and the telegraph permitted the widely dispersed manoeuvre of independent bodies of troops which is a salient feature of operational art.<sup>2</sup>

Was the evolution of operational art indeed a concomitant of technological change, or did it antedate the major inventions of the Industrial Revolution? This work makes the case that operational art emerged in the period between the campaigns of Frederick the Great and the end of the Napoleonic Wars. It will be shown that operational art was not the child of technological progress, but the result of three dynamic interrelationships or dialectics:<sup>3</sup> the first is the interplay between military and non-military factors such as social, economic and political developments. The second is the interplay between military theory and practice. The third is the interplay between developments in military theory and practice in France and in Prussia.

In the period from 1740 to 1815 a major change in the complexity of warfare occurred. The increasing complexity of the phenomenon ought to be reflected by a corresponding increase of complexity in the analysis of warfare. Frederician warfare can be analysed on two levels, the strategic and the tactical. At the strategic level, unitary armies manoeuvred until they met in battle. At the tactical level, armies were deployed for battle and fought. With the development of all-arms divisions and army corps, however, armies began to advance on a broad front, trying to outflank and encircle the enemy. The transition from marching to combat, from strategy to tactics, became more fluid as the approach marches of the divisions or corps from several directions towards the battlefield were directly transformed into flank attacks on the battlefield. The strategic and the tactical levels began to merge, creating a tactical-strategic continuum. In the analysis of this form of warfare, the two-level model of analysis loses its utility and a three-level model ought to be adopted. Whereas the two-level model implies a strict divide between the strategic and the tactical level, the three-level model reflects the change in warfare by assigning the emerging transitional zone between the strategic and the tactical levels to the operational level.

For the purpose of this work, the following definitions for the two-level model of analysis are introduced: ‘strategy’ is the art of war at the strategic level, concerned with political decisions such as the definition of the war aim, the mobilization of manpower and material, the planning and conduct of campaigns and the determination of the purpose as well as the context of battle. ‘Tactics’ is the art of war at the tactical level, concerned with fighting a battle in pursuit of the strategic purpose. This model will be used for the analysis of warfare in Chapter 1.

The definitions for the three-level model of analysis are as follows: ‘strategy’ is the art of war at the strategic level, concerned with political decisions such as the definition of the war aim, the mobilization of manpower and material, the determination of strategic objectives such as the destruction of the enemy army and the allocation of forces to the theatres of war.<sup>4</sup> The strategist uses strategic instruments, usually armies. ‘Operational art’ is the art of war at the operational level, concerned with the conduct of campaigns with the means provided by strategy, in pursuit of the strategic objective in one theatre of war. The operational artist uses operational instruments, army corps or all-arms divisions and their complementary staff organization.<sup>5</sup> ‘Tactics’ is the art of war at the tactical level, concerned with fighting a battle in pursuit of either the operational or the strategic objective.<sup>6</sup> The tactician uses tactical instruments, formations between corps and battalions.

The transformations in the art of war from the Wars of Frederick the Great to the Napoleonic Wars have by no means gone unnoticed. On the contrary, a flood of literature has been produced on this subject. Among the most eminent scholars in this field were Camon, Chandler, Colin, Delbrück and Lewal. They made the crucial observation that manoeuvre beyond the battlefield and battle began to merge. Colin wrote about Napoleon’s art of war: The battle is the focus where the broad outlines of the campaign converge.<sup>7</sup> Also Chandler wrote: ‘Unlike his eighteenth-century forebears, who rigidly distinguished between manoeuvring and giving battle, adopting different formations for each activity, Napoleon fused marching, fighting and pursuing into one continuous and devastating process.’<sup>8</sup> They also discussed aspects of Napoleon’s operational art, which Colin called ‘grand tactics’ and Lewal ‘*stratégie de combat*’<sup>9</sup> Napoleon’s battles and campaigns were the subject of their extensive analysis. They identified the central importance of battle in Napoleon’s strategy.

These scholars, however, gave scant attention to the close interrelationship between military and non-military factors. Their studies also tend to be descriptions of the final product, Napoleon’s art of war, rather than attempts to retrace the evolutionary process. Only Delbrück discussed the relationship between society, army composition and tactics in the context of a comparison of Frederick’s and Napoleon’s art of war. Yet, his analysis remained very general and failed to discuss individual campaigns to back his insights.<sup>10</sup>

For all the ground-breaking contributions of their analyses, none of these historians made the case for introducing the operational level in the analysis of Napoleonic warfare. More recent works by Epstein, Luvaas and Newell place operational art firmly in the Napoleonic period, but Luvaas and Newell do not discuss the evolutionary process leading to its emergence in any depth, whereas Epstein points out the impact of social change on warfare but does not discuss warfare in the age of Frederick and the French Revolution.<sup>11</sup>

Though various aspects of the interrelationship between military and non-military factors in the evolution of warfare in general, the interrelationship between military theory and practice in general, and in the specific case of France and Prussia from the Frederician to the Napoleonic period have been discussed with varying degrees of attention, so far there has neither been a study integrating the analysis of all three dynamic interrelationships in the evolution of operational art nor has the evolution of operational art itself formed the centrepiece of any work.

Naturally, the present study is limited in scope. Though important developments in army organization and the conduct of war also took place in other countries such as Russia and Austria, the focus is on France and Prussia. The reason for focusing on these two countries is twofold: first, Prussia was the military pace-maker of Europe under Frederick the Great, until France became the model of military effectiveness in the course of the Revolutionary and the Napoleonic Wars. Second, a mutual learning process can be retraced. The French conducted military reforms after they had analysed their defeat at the hands of the Prussians in the Seven Years' War. In 1792–1795, it was the Prussians' turn to be checked and, in 1806, to be defeated by the French. Following the catastrophe of Jena, the Prussians enhanced the military effectiveness of their army and were on the winning side in the War of Liberation.

As a consequence of the focus on these two countries, only those campaigns in which these nations faced each other have been scrutinized in detail. Therefore, the two campaigns of Napoleon which will be analysed in Chapters 3 and 5 are those of 1806 and 1813. The campaigns of 1814 and 1815 have not been discussed because their analyses would not add significant insights into French and Prussian operational art.

Though it will be shown that operational art had reached a high-water mark of military effectiveness in Napoleon's Jena Campaign, the story of operational art is not to be considered a tale of steady evolution. Evolutionary processes are rarely linear and free from regression. Following Napoleon's stunning success of 1806, some of his campaigns demonstrated a high degree of operational skill and a high quality of his operational instruments, whereas other campaigns were less impressive in these respects. Nonetheless, taking a general view of the peaks and troughs of Napoleon's military performance, his contribution to the evolution of operational art was crucial.

Chapter 1 will discuss the theory and practice of war from the Frederician period to the French Revolution. It will be shown how operational theory was first conceived and how operational instruments were created towards the end of this period. Chapter 2 will demonstrate the first use of operational instruments in warfare and the reaction of military theorists to revolutionary France's way of warfare. In Chapter 3, the campaign of 1806 will be discussed in detail in order to show Napoleon's operational art in its most successful form. Chapter 4 will expound the Prussian reforms which led to the creation of operational instruments in Prussia. Finally, the clash of Prussian and French operational instruments in the campaigns of 1813 and the emergence of Prussian operational art will be the subject of Chapter 5.

# MILITARY THEORY AND PRACTICE: 1740–1791

This chapter will provide a background for the evolution of operational art. It will be shown how the interrelationship between military and non-military factors provided the Prussian army with superior military effectiveness and efficiency. It will be demonstrated how even superior military performance could not deliver the decisive victory which Frederick was pursuing.<sup>1</sup> Also, the impact of military theory on military practice and vice versa will be demonstrated, with particular reference to French military reforms after the Seven Years' War. Finally, it will be shown how French military reformers created operational instruments as well as operational theory guiding their use, which would help to overcome those limitations in warfare which had denied Frederick decisive victory in battle.

First, the military theories preceding the Seven Years' War shall be discussed to provide a theoretical background of Frederician warfare. Saxe, Santa Cruz and Frederick himself were three of the most eminent military theorists of this period. A discussion of their theories will become relevant in the light of developments discussed in the following chapters. The following section will discuss the practice of Frederician warfare. The third section presents the French conduct of war. The fourth section is concerned with military theory after the Seven Years' War. The last two sections deal with the French and Prussian armies between the end of the Seven Years' War and the French Revolution.

## **Military theory: 1740–1763**

Saxe considered the art of war to be divisible into two parts, the soldier's trade and generalship. At the lower level of the art of war, warfare was simply a trade that could be learned by everybody. At the higher level, warfare was an art which required genius to use the military instrument in the most perceptive and subtle way.<sup>2</sup>

Regarding the nature of the army, Saxe recommended universal military service without consideration of rank or birth as a means to furnish a huge reserve, to raise the prestige of soldiering and to invigorate the whole nation with a martial spirit.<sup>3</sup> The field army itself, however, should not number more than 50,000 men since an army larger than that could not be effectively controlled.<sup>4</sup> He considered the quality of the troops more



important than the quantity because it took several years to train a fully effective soldier.<sup>5</sup> In spite of his emphasis on drill and training, Saxe did not consider the soldier a machine. He realized that soldiers were human beings with all their weaknesses but also strengths. In order to bank on the latter, the commander should appeal to the sense of honour of his men.<sup>6</sup>

Regarding the conduct of campaigns, Saxe wished to make armies more self-sufficient in supply in order to increase speed and flexibility. He recommended a well-organized system of levying contributions in occupied areas, which would liberate the army of the shackles of rear supply. He also suggested harvesting grain on the fields in order to grind it to flour.<sup>7</sup> Taking into account that contemporary armies still were dependent on rear supply, Saxe suggested beating the enemy by severing him from his supplies. He went so far as to say that a great commander could win a campaign without fighting a battle.<sup>8</sup> This statement should not be taken at face value. Saxe fought battles willingly and with good success. His statement has to be seen in the light of his opposition to Folard, who was rather too fond of battle for Saxe's taste.<sup>9</sup> Relying on the protection provided by fortresses, he suggested beginning the campaign late in the year when the enemy would already have exhausted himself in marches and sieges.<sup>10</sup>

Regarding the conduct of battle, Saxe favoured the abandonment of linear tactics based on firepower. He preferred deep formations advancing with cold steel, supported by infantry using accurate fire at will. In order to effectively combine these two elements in the attack and defence, Saxe invented a novel tactical formation, the 'legion', an all-arms formation integrating cavalry, light and heavy infantry, and light support artillery. It was no coincidence that Saxe called these combined formations 'legions'. Military theorists of this period generally dwelled much on the Roman example, embodied in the works of Vegetius, Polybius and Caesar. The weaponry envisaged for the legions also had the Roman touch: heavy infantry should carry bullet-proof shields and helmets; half of them should be armed with pikes. Cavalry should be armoured and rely on the lance. His proposals to use breechloading muskets and ultra-light artillery, the latter replacing the cumbersome field artillery, for accurate long-range fire support took more advantage of contemporary weapon technology. The legion would be self-contained and manoeuvre on its own on the battlefield as well as in the theatre of war. Once the enemy was beaten, Saxe considered pursuit with a token force sufficient for the duration of a day.<sup>11</sup>

Frederick had much in common with Saxe in terminology. He called the lower level of the art of war *petite service*, concerned with discipline, drill, tactical formations and recruitment. The higher level of the art of war was called *connaissances du général*, dealing with campaign plans, conduct of battle and sieges. Frederick also used the term 'tactics', but this was hardly defined and served as a catch-all term for all military endeavours ranging from battles to campaigns.<sup>12</sup> An awareness that warfare in this period was waged on two levels, the tactical and the strategic level, was not to be found in Frederick's or anybody else's works. The distinction between the two levels of the art of war only remotely reflected an understanding of the tactical and the strategic levels.

Regarding army composition and discipline, Frederick, like Saxe, valued a small, controllable army of high quality more than a large, uncontrollable army of inferior quality.<sup>13</sup> Rather than having recourse to universal conscription, as Saxe suggested, he preferred using mercenaries. In order to turn these into reliable soldiers, he believed that they had to be subjected to strict discipline and drill. Obedience had to rule from private

to general.<sup>14</sup> Nonetheless, like Saxe, Frederick recognized that positive elements of motivation such as personal honour, *esprit de corps* and the commander's charisma could bolster morale.<sup>15</sup> In this context, Frederick regarded the role of the officer as central. A brave colonel would make a brave regiment. Since he believed only nobles to have the necessary sense of honour and martial spirit, officers had to be noblemen. Frederick further specified that the officer had to be wholly devoted to service, which included a responsibility for increasing his professional knowledge by study. Since he deemed professional knowledge particularly important for staff officers, they had to hold their positions in permanence in order to gain experience.<sup>16</sup>

In regard to the conduct of war, Frederick stressed that wars had to be short and brisk because Prussia's modest resources would be quickly exhausted.<sup>17</sup> This implied that the Prussian army had to act aggressively, irrespective of the relative strength of the antagonists. Frederick warned against deep penetrations of enemy territory, since these *pointes* would founder on supply problems. If enemy territory ought to be invaded, he recommended advancing slowly and deliberately, taking one fortress after another.<sup>18</sup>

Since Frederick regarded considerations of supply as supremely important for the conduct of the campaign, he discussed *petite guerre*, the war of ambushes and snatch attacks on communications.<sup>19</sup> Like Saxe, Frederick held that the aim of the commander should be to cut off the enemy's supply and destroy his army by hunger rather than by the sword. This statement, echoing Vegetius, contradicted Frederick's usual preoccupation with battle and was not reflected in his practice.<sup>20</sup> Frederick occasionally expressed ideas which were contradicted by his actions. He disapproved, for instance, of winter campaigns since they would ruin the army. Yet, he conducted winter campaigns in 1740, 1742 and 1744–1745.<sup>21</sup>

Regarding the conduct of battle, Frederick, possibly inspired by Vegetius, developed the oblique order by which he hoped to beat an enemy three times more numerous. In spite of this optimistic assumption, he stressed the importance of concentrating all available troops for battle. Like Saxe, Frederick discounted the effect of unaimed volleys and called for the advance of infantry with muskets shouldered. Though Frederick did not suggest novel formations such as the 'legion', Frederick, like Saxe, called for improved cooperation among the arms.<sup>22</sup> Unlike Saxe, Frederick recognized the importance of pursuit. The pursuit was to be conducted by the bulk of the army for several days. He realized, however, that the exhaustion of the troops and supply problems would make this hard to achieve.<sup>23</sup>

With regard to the conduct of war, Santa Cruz suggested remaining on the defensive if the army was inferior, and taking the offensive when it was superior in numbers, whereas Frederick was prepared to take the offensive in any case. In offensive warfare, Santa Cruz, like Frederick, suggested a deliberate advance, leaving no enemy fortress behind. In defensive warfare, Santa Cruz suggested relying heavily on the use of fortified camps and fortresses.<sup>24</sup>

With regard to battle, Santa Cruz presented a long list of reasons for fighting a battle. Occasions of this kind were the relief of a besieged fortress, the expulsion of an invader, the control over contested territory in order to devour its resources, the preparation of a siege, the opportunity of beating enemy armies separately, and others. The list of reasons for refusing battle, however, was much longer. Santa Cruz took his caution so far that he

advised the commander not to fight without the express permission of his sovereign as well as the consent of a council of war.<sup>25</sup>

Santa Cruz's caution with reference to battle becomes understandable taking into account that he believed that battle could and often would decide the outcome of war: a strange notion which did not reflect the military experience of this period. Possibly, he was influenced in his belief by Vegetius.<sup>26</sup> Santa Cruz was equally cautious with regard to pursuit. He advised a careful pursuit since the enemy might ambush his pursuers.<sup>27</sup>

## **Military practice in Prussia: 1740–1763**

### *The strategic level*

Prussian war aims and strategy changed in the course of the three Silesian Wars from territorial expansion in the first two wars to the survival of Prussia as a great power with the Hohenzollern dynasty at its head in the Seven Years' War.<sup>28</sup>

Frederick had to wage war simultaneously against three other major powers and a number of smaller powers. Since Prussia enjoyed no protection either by a fortress belt like France or by strategic depth like Austria and Russia, the multiple onslaught could only be stopped by the Prussian army in battle. Therefore, attempting to fight decisive battles, and forcing one enemy after the other to withdraw from the war, answered best Frederick's interests.<sup>29</sup>

The high stakes in this war, the imperative to raise and maintain an army equal to the military threat and the scarcity of Prussian manpower and resources forced Frederick to mobilize his country for war to the utmost degree. In addition, Frederick's battle-seeking strategy made a high degree of mobilization even more urgent, since frequent combats would tear gaps into the Prussian ranks and call for numerous replacements. Furthermore, efficient administration permitted not only exhaustive but also rapid mobilization, which helped Frederick to occupy key strategic territory such as Saxony at the outset of hostilities.<sup>30</sup>

Frederick was able to mobilize the necessary quantity of men and material because Prussia's social and economic structures were designed to sustain Prussian military power. Economic policy ensured that the army's material needs were fulfilled and as much revenue as possible filled the war chest. In this context, Frederick made considerable strides towards industrialization. The army, in turn, helped the economy since soldiers were a source of cheap labour. Agriculture received military assistance as the army gave artillery horses to farmers in times of peace. This served both army and farmers: the army did not need to feed the horse in peacetime, and the farmer had a strong farm animal at his service. Another example of interlocking economic and military arrangements was the grain magazines: when grain prices were low, magazines would fill their stocks. When grain prices were high, thus making life difficult for recipients of fixed wages such as soldiers and labourers, magazines sold stocks and pushed prices down again.<sup>31</sup>

Social policy also played its part. Townspeople were exempt from service but they had to provide billets and forage and pay taxes for the war effort. The peasantry not only paid taxes and rendered ancillary services, many of them also had to serve in the army. This

service obligation was due to the canton system, which required each regimental district to apply selective conscription in order to fill the regiments if not enough mercenaries could be recruited. In order to prevent economic damage and consequent loss of revenue, only the least productive elements of that part of the population liable for canton duty were called up and even they would serve for only two months per year. Care was taken to recruit as many mercenaries as possible to leave most Prussian subjects free to work and pay taxes. Consequently, no more than a half to two-thirds of troops consisted of cantonists. The army's control over them was absolute. Officers granted or refused the right to marry, intervened in legacy matters in order to ensure that the strongest son, even if firstborn, would become a soldier, demanded labour service on roads and fortifications, driver services for train and artillery and excessive contributions in cash and kind. The recruitment demands on that part of the population liable for canton duty were high. In 1762, the Prussian army mustered 260,000 men, seven per cent of the population, most of them cantonists.<sup>32</sup>

In addition to the tax-paying townspeople and the serving and tax-paying peasantry, the nobility was also a major source of Prussian military strength. The relationship between king and nobility was symbiotic. The power of the king rested on the loyalty of his nobles, who were obliged to serve in his army. Supervision was close, each officer being subjected to institutionalized scrutiny of his behaviour in service as well as private life.<sup>33</sup> The strong grip of the king on his noblemen became obvious in the winter of 1741–1742 when Frederick had driven his officers so hard that scores of them asked for dismissal, only to see their demands turned down. In return for faithful service in danger and hardship, the noble officer corps enjoyed the highest social standing, symbolized by the king himself wearing the uniform and leading his army as the first among equals. In order to bolster this status, the nobility enjoyed a near-monopoly on the military profession, and was granted an immense amount of power and control over their serfs. When an officer became invalid or old, he served in the administration, seconded by former non-commissioned officers in subordinate administrative positions. Having military men in the bureaucracy not only permeated this body with the military code of loyalty and honour but may also have reduced friction between army and administration, which was useful in the context of mobilization.<sup>34</sup>

Not only this administrative arrangement, but also Frederick's role as a soldier-king proved important for the war effort. Frederick was his own minister of finance, economics and foreign affairs as well as commander-in-chief.<sup>35</sup> The integration of policies and military strategy, due to Frederick's close control over every aspect of affairs of state and war, probably contributed to Prussia being the only continental power that was not just able to cater to all the army's needs in terms of weapons, uniforms, equipment, supplies and cash, but also finished the Seven Years' War with well-filled coffers. The close interrelationship between economy, social structure and military organization made Prussia a military state able to mobilize manpower, money and material to a degree astonishing for such a small country.<sup>36</sup>

Yet, for all these efforts, mobilization was not complete. Mercantilist principles called for a strict distinction between those who had to fight and those who had to produce revenue, demanding that as many men as possible should work rather than fight. Consequently, only a part of the able-bodied male population was called up. Mercantilism discouraged recourse to the full mobilization of Prussian males, and the

feudal structure of society prevented the large-scale admission of commoners into the officer corps. Commoners had career prospects only in the artillery, the engineer corps, the hussars and the free corps, though, due to rising officer casualties, they were increasingly to be found in all arms towards the end of the war. This restriction of admission to the officer corps barred the military talents of many commoners from being employed in the service of the Prussian state. Consequently, Prussia's human resources were only partly exploited.<sup>37</sup>

Limitations in the mobilization of Prussian manpower, such as the failure to introduce universal military service and the meritocratic principle, could not be overcome without radically changing Prussia's social structure and the attitudes on which this structure was based. The same kind of limitations applied to agricultural reform. The evolution of agriculture from feudal to capitalist modes of organization and production was deliberately delayed in order to preserve the economic and social bases of Prussia's noble officer corps.<sup>38</sup>

Apart from the mobilization of manpower and material, modest efforts towards spiritual mobilization were made. Frederick and Maria Theresa launched a war of propaganda against each other. Frederick tried to impress the justness of his cause on the public, to the point of producing faked Austrian diplomatic correspondence in order to justify his pre-emptive strike against Saxony in 1756. Austrian writers regaled their mostly Catholic audience with comparisons between the Protestant Frederick and Lucifer.<sup>39</sup>

In the century to follow, the state would appeal to the force of nationalism in order to rouse the population for war. Not so in Frederician Prussia. The Prussian subject had to obey the laws and pay taxes. The king had no interest in rousing the feelings of the population and supplying it with arms. He was, nonetheless, prepared to take recourse to state-organized guerrilla warfare and the mobilization of peasant militias if this seemed unavoidable. Most instances of armed resistance by the Prussian peasantry, however, were prompted by the spontaneous desire to defend personal property and the safety of the family rather than by royal order or nationalist sentiment.<sup>40</sup>

Rather than kindling the fervour of the population, it was more imperative to motivate soldiers to countenance the risks of their profession. High rates of desertion in the Prussian army, as in other armies of the period, suggest that soldiers were not always willing to accept these risks. The prevalence of this problem is highlighted by Frederick's instructions to his generals which begin with a long list of measures to prevent desertion. Such measures had a deleterious effect on military effectiveness. Generals had to keep marches short in order to prevent straggling; this reduced strategic speed. Generals had to avoid night marches since they offered soldiers opportunities to disappear into the darkness; this reduced strategic flexibility. Generals had their troops sleeping in tents rather than in the open in order to keep them under close supervision; the consequence being that tents swelled the baggage train. Hussars were more busy circling the army like shepherd dogs than carrying out reconnaissance. Patrols were kept close to the main body to prevent them from vanishing. Generals had to forbid soldiers to search for food, fearing that they might not return. This fear, apart from the general poverty of local supplies, prevented the army from living off the country. Generals were forced to take utmost care of their communications since a hungry army could simply melt away like the Prussian army in Bohemia in 1744. Generals were reluctant to have their troops fight

in open order since this offered the individual soldier opportunities to skulk.<sup>41</sup> In spite of this preoccupation with preventing desertion, the willingness of soldiers to fight was often astonishing and gave lie to the popular notion that Frederician soldiers only fought because they feared their officers more than the enemy.

That fear of punishment alone cannot explain this bravery becomes obvious with a look at battalions of Saxons, press-ganged into the Prussian army, which went over to the enemy in scores in spite of a severe penal code. There are enough other examples which show that troops, and even officers, would run if they were determined not to fight. Positive motivation can be credited to *esprit de corps*, the pride of the soldier in his profession, Frederick's charisma, paternalism and cohesion due to cantonists of the same village serving together.

Prospects for plunder, cash rewards and promotion also played a role. Nationalism had not yet become a potent force, though it was not uncommon for ethnic antagonisms to increase troops' aggressiveness. The much-quoted use of the stick in Frederick's army need not have had a very deleterious impact on morale. On the one hand, the use of violence as a pedagogical cure-all was commonplace as teachers hit their pupils, parents hit their children and craftsmen hit their journeymen. In this period, offenders as young as 9 years were publicly executed for minor offences.<sup>42</sup> On the other hand, corporal punishment may even have increased morale. Since only the stupid, vicious or lazy soldiers were beaten, their more attentive or intelligent comrades who avoided the stick may have felt honoured by this distinction. The importance of the Lutheran faith and its concept of duty should also not be overlooked as there were several instances where regimental chaplains rallied broken battalions.<sup>43</sup> Only the consistently high spirit can explain why the Prussian army's morale did not crack during this long and bloody conflict, why desertion sometimes decreased prior to battle, and why the army did not simply dissolve after the crushing defeats of Kolin and Kunersdorf.

When mobilization was complete, the army took to the field. Campaign objectives varied from year to year. The aim of some campaigns, such as those of 1744 and 1758, was to put pressure on the Austrian court by attempting to advance on Vienna. The objective of the 1756 campaign was to take Saxony out of the reckoning as an opponent and to exploit its resources, which were essential for the Prussian war effort.<sup>44</sup> The aim of most Prussian campaigns during the Seven Years' War was to expel armies which had intruded Prussian-controlled territory or were bound to do so. This strategic situation called for the pursuit of decisive battle. Limitations inherent to warfare in this period, however, made it difficult for Frederick to achieve such a decisive battle.

Deep penetration into Austrian territory, either in order to take the enemy's capital or to force battle on the enemy by threatening his capital, was hardly possible. Frederick had to overcome the Bohemian mountains first and was then stopped by fortresses such as Brünn or Olmütz. He could bypass a fortress, but this carried the risk of the garrison cutting off his supplies as Frederick discovered in 1742. In order to prevent the garrison from sallying forth, he could leave an observation corps behind. This option, however, would have caused an intolerable degree of strategic consumption on the invading army, rendering it too weak to continue the advance on the capital. Furthermore, a defeat of the observation corps would have severed the invading army's line of communications. If Frederick, therefore, chose not to bypass a fortress but to take it before continuing his advance, as he suggested in his military writings, he encountered other problems. When

the Prussian army settled down for the siege, the depletion of local forage as well as the need to bring siege material, guns and ammunition forward increased the dependence on the lines of communications. The Austrians, due to their superiority in light troops, could take advantage of this increased dependence on communications by disrupting them. The severance of communications then forced the Prussian army to abandon the siege and retreat. In this way, the blocking power of fortresses combined with the disruptive power of light troops frustrated Prussian attempts to advance on Vienna in 1758. Even if the way was not barred by a fortress, the need to leave garrisons behind to guard the line of communications would have substantially weakened the already small Prussian invasion army.

The cause for the Prussian armies' vulnerability to strategic consumption was their small size, which was the result of a multiple-front war. Prussia's 200,000 men had to be distributed among several armies and garrisons in order to cover all major invasion routes.<sup>45</sup> Frederick also preferred to keep his armies small and easy to control. Even small armies were unwieldy because they manoeuvred in one block. Advancing with a unitary army severely reduced prospects to outmanoeuvre and corner an enemy. An army advancing with train and baggage along a single road was slow. Low speed prevented surprise and rendered superior manoeuvring difficult. Advance along one road also permitted only a limited range of options, again, reducing prospects for surprising and outmanoeuvring the enemy.<sup>46</sup> Since the reconnaissance by the vanguard was conducted on a narrow front, precise intelligence on the enemy's whereabouts, necessary for outmanoeuvring him, was lacking. Poor reconnaissance, combined with the activity of enemy light troops, rendered security insufficient as Frederick experienced when he was surprisingly attacked at Soor and Hochkirch. The natural reaction to this lack of security was to keep the army concentrated. Here, a vicious circle closed: reconnaissance was poor due to the advance with a unitary army; the army, in turn, had to advance in one block due to the poverty of reconnaissance.

An additional disadvantage suffered by the Prussian army was its inferiority in light troops in the contest with Austrian hussars and Croats, and Russian Cossacks, though the efficiency of Prussian hussars improved in the course of the three Silesian Wars. The consequence of this inferiority was the relatively low quality of Prussian reconnaissance, whereas Austrians and Russians had a clearer picture of Prussian positions and intentions. This state of affairs, again, rendered surprise difficult to achieve.<sup>47</sup>

Prussian inability to surprise and outmanoeuvre the enemy, largely due to advancing with a unitary army, provided the enemy with the opportunity to avoid battle. The Austrians and Russians took advantage of this opportunity since they knew the Prussian army to be better trained and more efficient in open battle than their own. If the enemy decided to give battle, it was on his terms, either when he wished to attack with superior numbers himself, or when he was waiting for the Prussians to attack him in strong positions. In neither case could Frederick hope to win a decisive victory.<sup>48</sup>

Even when the enemy could be brought at bay and beaten, pursuit, necessary to turn an ordinary victory into a decisive one, was hardly possible since Frederick had to hasten to meet the next enemy army. Even when pursuit could be carried out, the small size of the armies committed to battle meant that even a victorious battle followed by pursuit would neutralize only a fraction of the enemy's armed forces. Those losses inflicted on the enemy, furthermore, could be replaced in winter quarters. Since Frederick was

fighting a coalition, the combined resources of his enemies made it particularly difficult to inflict a truly crippling defeat.<sup>49</sup>

The nature of supply arrangements also played its part in frustrating Frederick's designs. Flour waggons shuttled between magazines and field bakeries; bread waggons shuttled between field bakeries and army. The dependence of Frederician armies on these supply arrangements hampered strategic mobility in several ways. Rear supply reduced strategic mobility since fortresses could not be bypassed if they blocked an indispensable road or waterway. Even where this was not the case, fortresses could not simply be ignored. Likewise, an enemy army in strong tactical positions could not be outflanked because the outflanking army risked having its own communications severed, following the old adage that he who outflanks is being outflanked himself.

Dependence on rear supply also slowed the army down because the army had to march sufficiently slowly to permit the bread waggons to keep up. The very size of these columns explains what made them veritable millstones: one of the four columns invading Bohemia in 1757 had 2,000 supply vehicles following in its wake. From time to time, the army even had to stop completely in order to establish new field bakeries. Consequences of the army's slow advance were, once more, reduced prospects for surprising and outmanoeuvring the enemy. Rapid marches such as the march from Zorndorf to Saxony were only possible because the Prussian army passed through friendly territory, where troops could be fed in passing from magazines and by the local Prussian administration, rather than having to wait for supply trains. The baggage train containing officers' baggage and tents was also responsible for the low speed of movement. Supply trains not only reduced the rate of advance but also impaired flexibility in manoeuvre since it took time to change their marching schedules. Re-routing vast columns of vehicles, sometimes several thousand, at short notice would have created chaos and reduced the troops to starvation.<sup>50</sup>

When an enemy army was beaten, dependence on rear supply rendered prompt as well as prolonged pursuit difficult. Prompt pursuit with the whole army was frustrated by the slowness of the supply train. Prolonged pursuit was prevented by the limited range within which the supply train could feed the army from the closest magazine. The victory of Hohenfriedberg was not followed by pursuit for this reason. When the beaten enemy sought shelter behind a fortress, the dependence on rear supply prevented the bypassing of the obstacle. Frederick summarized his frustration with limitations imposed by dependence on rear supply, when he complained that not he but flour and forage were the masters of the army. The campaigns which foundered in Bohemia and Moravia due to supply problems in 1742, 1744 and 1758 confirmed this observation.<sup>51</sup>

Frederick made conscious efforts to overcome limitations imposed by advance with a unitary army and dependence on rear supply. In 1757, for instance, he invaded Bohemia in four columns which were planned to converge after having crossed the mountains. The advance in several columns rather than in one army made it difficult for the enemy to fathom Frederick's designs. Furthermore, the multiple column advance was faster because the individual marching columns were shorter. Since Frederick did not wish to waste the momentum of the surprise invasion, he ordered the army to subsist on Austrian depots to be captured in the Bohemian plain rather than wait for supply trains to catch up.

Since Frederick could not always rely on being lucky enough to capture enemy depots, he also tried to increase his army's degree of self-sufficiency. The limits of self-



sufficiency, however, were quickly reached. Low population density and lack of high-yielding crops such as potatoes and turnips rarely permitted an army to rely entirely on local resources, though detachments could live off the land by purchase or requisition. Furthermore, due to the advance in a unitary army on a narrow front, resources of only a narrow swathe of country could be consumed. As a stopgap measure, Frederick ordered iron hand-mills to be distributed to the troops so that grain could be taken from the fields and ground to flour, if the flour columns were delayed. The flour, however, had then still to be turned into bread in field bakeries. Another improvement in supply matters was the use of iron ovens which could be set up in one day rather than the more common brick ovens which took several days. To expedite the baking of bread even further, Frederick pressed civilian bakers into service when a town was close to the army.<sup>52</sup>

Apart from supply problems and advance in a unitary army, strategic conditions reduced prospects for inflicting serious damage on the hostile coalition. Since Prussia was fighting a multi-front war, Frederick had to entrust theatres of war to other commanders such as the Duke of Brunswick or Prince Henry. Not every commander, however, was as capable as these two deputies. The consequence was that battles won by Frederick could be offset by battles lost by one of his generals. The victory of Rossbach, for instance, was counterbalanced by the loss of Breslau which, in turn, had to be rectified by the victory of Leuthen.

Many generals were out of their depth in independent command since the training of general officers was restricted to the experience of regimental service and the reading of the odd book of military history. Many Prussian generals of the 'Old Dessauer' school were even barely literate. The lack of training and experience in independent command, combined with the fear of Prussian generals of their sovereign, induced them to follow to the letter their orders rather than acting on their discretion—with sometimes fatal results.<sup>53</sup> Frederick addressed this problem. He wrote instructions for his generals meant to give them advice in their independent commands. A more broad-based effort to educate the officer corps was the establishment of regimental libraries.<sup>54</sup>

One reason for the failure of independently operating generals was the lack of a sophisticated staff system. The general-quartermaster staff (*Generalquartiermeisterstab*) had only 25 personnel. Attached to the staff were *guides* (*Feld-jägercorps*), responsible for carrying dispatches and directing marching columns, and *Brigademajors*, officers dispatched to the brigades in order to help in administrative matters. The commissary, heading a small separate organization, was responsible for matters of supply. The main task of the staff was the selection and fortification of camp sites as well as march planning. The staff merely assisted in planning and organization. It was not an advisory body, nor did it devise campaign or contingency plans on its own initiative. The staff's role was further diminished by the royal *aide-de-camps* (*Generaladjutanten*).

*Generaladjutanten* enjoyed Frederick's particular trust and were assigned a variety of missions. Winterfeldt's assignments, for instance, included economic planning, training of hussars, diplomatic missions, military administration and planning, command of detachments and the organization of espionage. The *Generaladjutant* also played the role which was later reserved for the chief of the general staff: Winterfeldt devised mobilization, campaign and contingency plans and discussed them with the king. Winterfeldt fulfilled a further function: he was dispatched to assist and advise generals holding independent command. These generals were expected to heed Winterfeldt's

opinion. This arrangement of a competent staff officer becoming the commander's one-man-think tank was to become a Prussian tradition. For himself, Frederick did not need a staff officer with advisory function attached to his headquarters. He was capable of directing his small armies himself with merely some organizational assistance from the general-quartermaster staff.

The minor role and haphazard organization of the staff is further highlighted by the fact that Frederick's draft orders were written, expounded and dispatched by a civilian, the royal councillor (*Geheimer Kriegsrat*) Eichel. Frederick went so far in his habit to ignore the general-quartermaster staff that he did not even let it participate in the planning for the 1756 campaign. Instead, Eichel and Winterfeldt had to draft all mobilization and campaign plans including the marching tables on their own. Yet, for all this apparent contempt for the staff, Frederick took care to improve their capacities. He demanded that staff officers should hold their positions in permanence in order to gain experience, and he personally instructed the 12 best graduates of the military academy (*Académie des Nobles*) in order to raise a stock of competent officers for staff or command functions.<sup>55</sup>

### *The tactical level*

Due to limitations inherent in campaigning in this period, it was difficult for Frederick to force battle on an unwilling opponent. This unwillingness is easy to understand when taking into account that battle would result in the loss of soldiers, who needed years of training and were hard to recruit, for marginal strategic advantages.<sup>56</sup>

The enemy could also slip away in the last minute since much time was needed for the attacker to deploy from marching formation into battle formation. If the enemy accepted battle, he did so when he had superior numbers or when he defended strong positions. Attacking an enemy in a strong position was not a promising course of action. Even in open terrain, Frederick's prospects to defeat the enemy were not good. In standard battle array, the army formed two lines, about 200m apart with infantry in the centre and cavalry on the wings. The second line served as a reserve to relieve exhausted battalions in the first line or to prevent the breakthrough of cavalry. Grenadier battalions stood between the first and second line of infantry and faced outwards, guarding the intervals of the infantry lines against cavalry. This gave the infantry array the shape of a long rectangle. Infantry battalions stood in lines of three ranks with the two battalion guns in the intervals between the battalions. Cavalry stood in lines of two ranks. Artillery was either distributed along the front or placed on hills. The task of the cavalry was to secure the flanks of the army and, if possible, to outflank the enemy. The linear formation was well suited for a firefight since a large number of muskets and guns were brought to bear. Infantry and artillery could fire at each other for hours in an attritional struggle from which the army with stronger discipline and higher rate of fire would emerge victorious. The infantry platoons advanced slowly and fired in turn. With shrinking distance the psychological pressure on the enemy mounted until one side or the other gave way.

These tactics might finally hand victory to the Prussians, due to their superior discipline and rate of fire, but dramatic results could not be expected for several reasons: linear formations could advance only at a very low speed, because it was imperative to maintain perfect alignment at all times. Attacks in line were, therefore, not bound to succeed because the slowness of advance gave the enemy time to shift his reserves and it

permitted him to subject the advancing infantry to such a withering musket and canister fire that the attack would hardly be pressed home with the bayonet. Frederick learned this at Prague, Kolin and Torgau where he lost 10 grenadier battalions when they advanced towards the muzzles of Austrian batteries. The cavalry on both sides fought their private battles with each other, whose outcome did not necessarily affect the battle of the infantry. Cavalry could rapidly defeat its opposite number and wreak havoc among disordered infantry as Hohenfriedberg, Rossbach, Leuthen and Zorndorf amply demonstrated, but it was often powerless against the fire and cohesion of ordered infantry, as the battles of Mollwitz and Minden most impressively showed. Artillery was the Grim Reaper in the defensive against an advancing enemy, but it was rarely mobile enough to advance and pulverize a segment of the enemy's line to prepare a breakthrough of infantry or cavalry. The immobility of artillery, the inability of cavalry to break infantry formations and the attritional nature of linear tactics favoured the defender and frustrated Frederick's hopes for decisive battle.<sup>57</sup>

Pursuit was equally unsatisfactory. Since enemy formations were rarely broken, the enemy, with his formations largely intact, would disengage and conduct a well-ordered retreat. This was further facilitated by the armies clashing frontally, leaving the line of retreat open. Furthermore, Frederick often fought outnumbered which prevented him from keeping a reserve of uncommitted troops to hold them back for the pursuit. Those troops committed to battle, having suffered heavy losses themselves, were often too exhausted and disorganized to conduct a prompt and vigorous pursuit. When a pursuit force was dispatched, it consisted of light cavalry which could easily be checked by enemy units retreating in good order. The vigorous pursuit after Leuthen was an exception.<sup>58</sup>

Since Frederick's strategy relied heavily on battle, he was particularly interested in overcoming its inherent costliness and indecisiveness. Consequently, he tried to gain a tactical edge over his opponents. The invention of horse artillery was meant to provide mobile fire support for the attack. When the small number of horse artillery available could not deliver sufficient close-range artillery support, Frederick used grand batteries of foot artillery to provide long-range supporting fire instead, for instance at Leuthen, Zorndorf, Kunersdorf and Burkersdorf. Improved training of cavalry was meant to render Prussian cavalry able to overrun the enemy and achieve a rapid decision, a success most notably achieved at Rossbach and, to a lesser degree, at Hohenfriedberg and Zorndorf. The introduction of the oblique order was meant to enable the numerically inferior Prussian army to beat a larger army by adroit tactical manoeuvring. In the oblique order, Frederick's weak left wing fixed the enemy whereas the reinforced right wing advanced in echelon to outflank the enemy's left wing. In order to attack Austrian hill positions at Burkersdorf in a more subtle way than usual, Frederick abandoned strict linear tactics and experimented with infantry brigades manoeuvring independently on the battlefield in order to make better use of the broken terrain. He also paid attention to realistic training. In 1753 and 1756, for instance, contested exercises with mixed detachments were conducted.<sup>59</sup>

Prince Henry and Duke Ferdinand of Brunswick added an invention of their own, the all-arms division. This formation permitted Prince Henry to successfully attack strong Austrian positions in the broken country around Freiberg simultaneously from all sides rather than rely on the usual frontal attack. For this purpose, Prince Henry divided his

army into four columns each containing all arms. The columns were meant to converge on the battlefield, encircle and annihilate the enemy. Since one of the columns failed to play its role adequately, the enemy escaped, though with heavy loss. Likewise, Brunswick succeeded in attacking the enemy's rear at Vellinghausen with two such divisions. Though the division would prove to be an important invention in the following decades, it fell into disuse in the Prussian army.<sup>60</sup>

## **Military practice in France: 1740–1763**

### *The strategic level*

In contrast to Frederick, Louis XV did not fight for stakes as high as his country's status as a major power or the survival of the dynasty. Apart from waging war with little sense of urgency, the French war effort was hampered by diverging war aims and interests within the alliance of which France was part. The French and Austrians were not unhappy to see the Russians defeated at Zorndorf because they did not like to see a powerful Russia intruding into Central Europe. Similarly, the French did not mind when the Austrians, their traditional enemies, were hard-pressed by the Prussians. The degree of distrust among the allies is amply demonstrated by the fact that the French court went to greater lengths to gather intelligence on its allies than on the enemy.

The process of campaign planning also suffered. Campaign proposals were shuttled back and forth between army commanders, the Court of Versailles, and the headquarters and courts of the allies until a weak compromise was agreed upon. By the time a common plan was adopted after considerable waste of time, Frederick had seized the initiative, as in 1757, and overthrown allied plans.<sup>61</sup>

Campaign plans did not call for the pursuit of decisive battle since strategic conditions did not force France, unlike Prussia, to take recourse to this desperate measure which risked the loss of irreplaceable soldiers. Instead, French plans called for a slow and systematic advance by taking every fortress on the way and turning it into a French depot. The war was to be won by steadily expanding control of territory and resources rather than by the destruction of the enemy army. This careful strategy was also an expression of inter-allied distrust as no army wished to pull the chestnuts out of the fire on behalf of the others.<sup>62</sup>

In line with the political and strategic lack of purpose and urgency, due to want of a clear war aim, French mobilization remained incomplete. Unlike Prussia, the French government would not permit the war to dictate economic policy. Furthermore, resources and manpower for the German theatre of war were limited since France had to fight Great Britain in the colonies and on the high seas. The division of effective political and military control, the one resting with the king at Versailles, the other with the commander in the field, created friction between state and army, unknown to a soldier-king such as Frederick, and prevented the army commander from receiving the military means as well as the free reign he needed.<sup>63</sup>

Inherent weaknesses of the French monarchy did not fail to play their part in rendering French mobilization incomplete. Louis XV's economic policy, for instance, unlike Frederick's, failed to contribute to military strength because feudal privilege, monopolies

and high taxation prevented modernization.<sup>64</sup> The weakness of the king *vis-à-vis* his nobility undermined France's military power. In the train of royal feebleness followed inefficiency, favouritism and corruption, none of them conducive to efficient mobilization. Offices were sold to the highest bidder, who was consequently eager to recover his expenses by fraud and embezzlement.<sup>65</sup> In the army, the king's dependence on the goodwill of the nobility forced him to appoint more officers than were needed. This resulted in a bloated and very expensive officer corps which needlessly strained state finances. In 1758, there were 129 brigadiers competing for command of 30 brigades. The ratio of officers to men was 1:11 in the French army compared to 1:29 in the Prussian army.<sup>66</sup> The price of inefficiency was considerable: whereas Prussia paid 56 million *livres* for the upkeep of 180,000 men, France paid 106 million *livres* for 140,000 men.<sup>67</sup> The poor state of finances forced the king to permit the private ownership of companies and regiments. This only aggravated the problem because the owner of the regiment could demand promotion, hence higher pay, under threat of laying down his command and taking his money with him.

Another problem entailed by private ownership of units was that wealth rather than talent rose to high rank. This was true not only for owners of regiments and companies, but also for staff positions which were filled by well-connected nobles rather than by unglamorous and less well-connected engineer officers, who, by dint of their scientific education, might have been best suited for this task. With the court nobility and rich commoners monopolizing the highest ranks, the lower nobility could not expect to rise above the rank of subaltern or, at best, field grade officer. Though Frederick restricted access to the officer corps as well, he made better use of the talent of those accepted.

If the French nobility had repaid their king for social and taxation privileges with professional and loyal service, as the Prussian nobility did, French military power would not have been compromised. Instead, French officers were notoriously unprofessional and hardly prepared to make sacrifices for their sovereign other than those demanded by the aristocratic code of honour. Winter campaigns, for instance, were not feasible because most senior officers left the army to spend the winter in Paris or elsewhere without even bothering to ask for leave. Thus, the nobility did severe damage to state finances without adequate return.<sup>68</sup> The financial war burden, exacerbated by the rapaciousness of the nobility, would later contribute to the downfall of monarchy and aristocracy in the French Revolution.

Particularly damaging to the war effort was the rivalry among coteries at court. The clique that temporarily held the upper hand had massive influence on the appointment of ministers and commanders. This kind of selection did not necessarily favour the most competent men. The Count of Clermont, for instance, had no military experience at all when he was appointed commander of the army in Germany. When there was a stalemate at court, command was shared between the rivals, for instance between d'Estrées and Soubise in 1762.<sup>69</sup>

Apart from the role played by the nobility, France's social and political structures were generally deleterious to the French war effort. The king had to negotiate with a host of corporations, such as the clergy, the nobility, the trade companies and the universities. Though this problem was not unknown in Prussia, the Prussian king was far more assertive than his French counterpart. The willingness of these interest groups to support a war fought in the colonies and east of the Rhine rather than in defence of French soil

was low.<sup>70</sup> The consequence was that the war burden was borne only with a grudge by those parts of the population which had to foot the bill. This increased hostility to the monarchy and rendered the introduction of universal military service even less thinkable than in Prussia, though some militia was incorporated into the army.

The same low degree of enthusiasm could also be found in the army. Morale in the French army was usually inferior to morale in the Prussian army. French mercenaries and militiamen were, unlike Prussian cantonists, fighting far from their own soil. They were led by unprofessional officers who cared more for their personal comfort than for their men. The army was often commanded by inexperienced leaders. If a successful commander emerged, he was likely to be replaced before he could develop a charisma comparable to Frederick's. The poor quality of recruits must also have depressed morale. French doctors discovered boys of 13, deaf, lame and nearly blind among the rank and file. Militiamen had a particularly low morale, apparent from the large number of self-mutilations. Yet, positive elements of morale in terms of professional pride, *esprit de corps* and personal honour were also present in the French army and account for several instances of individual and collective bravery.<sup>71</sup>

The practice of court factions effectively appointing their favourites was most deleterious for effective campaigning. Since a military defeat could result in a change of command in favour of the candidate of the rival faction, army commanders were loath to take risks, preferring instead to gain the court's consent for each move in advance. Considering the distances between Versailles and field headquarters, it is understandable that this practice had an adverse impact on the pace of campaigning. Rapid and surprising moves could not be expected under such conditions. Furthermore, the factional struggle continued after a commander had been appointed, even going as far as subordinates deliberately letting down their superior. To protect himself from scheming and sabotaging subordinates, the commander occasionally created independent commands for his most untrustworthy lieutenants so that they could do him little harm, but that also could not contribute efficiently to the successful outcome of the campaign.<sup>72</sup>

Unity of command was undermined by the weakness of the commander's position, by the occasional division of command between two generals, by interference of the king or by influential courtiers who ignored the chain of command. Frederick's position as a soldier-king, in contrast, provided unity and authority of command, which permitted him to wage aggressive campaigns and to take risks.

The French system of supply was inferior to the Prussian. The French army still used brick ovens which took up to two weeks to establish, considerably slowing the army's advance. Supply arrangements also restricted the range of the army to a higher degree than in the Prussian army. The power of the intendant to veto any army movement also did not increase strategic flexibility. As a consequence of supply problems, the French tendency to advance systematically from fortress to fortress was reinforced. The problem of supply and transport was aggravated by the rampant luxury of the French officer corps. Private baggage, wardrobes, furniture, beds, riding horses and coaches clogged the roads and wasted draught horses. A large host of servants and mistresses accompanied the army and needlessly strained the already overtaxed supply system.<sup>73</sup>

In addition, privilege and tradition added their share to the commander's burden. In planning marches, the staff had a lot of extra work to do because old regiments would not march behind new regiments, and the *Gendarmerie* insisted that each of its 16 companies

should take a different route. Likewise, reconnaissance suffered from cavalry refusing to do reconnaissance work because this was deemed below its dignity. As a consequence, French commanders often had no realistic ideas of the enemy's strength or disposition and were easily surprised by enemy moves.<sup>74</sup>

### *The tactical level*

Not only had the French army to cope with the same tactical limitations as the Prussian army, but it added some weaknesses of its own. The majority of French officers had a very relaxed attitude towards their military duties. They saw themselves primarily as nobles rather than officers. Consequently, officers spent more time on their manors than with the troops, with the latter usually being only three months per year. The correspondingly low degree of professionalism in the officer corps reduced overall tactical effectiveness. Furthermore, since matters of social status were considered more important than professional competence, infantry generals could find themselves in command of cavalry and vice versa.<sup>75</sup>

The ownership of regiments and companies had a deleterious effect on tactical effectiveness since the owner was averse to risking the loss of his investment. Cavalry charges, for instance, were ridden at a trot to avoid damage to the horses. Ownership of regiments combined with tradition and a lack of common regulations resulted in differences in organization, drill and training between regiments. Different systems of tactical evolutions could not fail to present problems on the battlefield. At Rossbach, the disorganization of the French infantry when trying to deploy from marching columns into line was possibly due to a lack of professionalism as well as to a lack of a universal system of deployment.<sup>76</sup>

For all its tactical shortcomings, the French army was not devoid of invention. Marshal de Broglie solved the problem of relatively long French deployment times, which had resulted in such a disastrous outcome at Rossbach, by organizing the army into divisions. Divisions were not meant to operate independently as operational instruments in the way divisions of revolutionary France would do later on. Divisions were not yet all-arms formations.<sup>77</sup>

The divisional system was clearly devised to permit rapid deployment. There were to be four infantry divisions of four brigades of the first and second lines with artillery attached, and two cavalry divisions with two brigades of infantry attached. All divisions would advance side by side, with the cavalry on the wings. Before the onset of battle, the cavalry divisions would deploy in cavalry wings, the infantry would deploy in two lines with artillery interspersed, the infantry brigades covering the cavalry divisions would rejoin the other infantry brigades. In other words, once battle began, the divisions were dissolved in favour of the traditional design.<sup>78</sup> Prince Henry's divisions at Freiberg, in contrast, had not only marched, but also fought as divisions. Furthermore, Prince Henry's divisions contained all arms, infantry, cavalry, artillery and light infantry. His experiment had the greater potential for battle as well as campaigning than de Broglie's.

### Military theory: 1763–1792

Frederick's insights after the Seven Years' War did not deviate much from his pre-war writings. His terminology had hardly changed. Though he now restricted the term 'tactics' more to combat than before, it still included foreign matters such as river crossings and foraging.<sup>79</sup>

Taking into account the problems related to inferior light troops, Frederick decided to improve Prussian capabilities in this branch. Light troops should protect their own lines of communication and threaten those of the enemy. Also, with the poor performance of Prussian reconnaissance in mind, he stressed that Prussian light troops had to become as competent in this role as their Austrian counterparts.<sup>80</sup>

Regarding the role of battle, his views remained contradictory. On the one hand, he intended to wage war with concentrated forces in a very aggressive manner, heaping scorn on mere border skirmishes. On the other hand, he favoured small engagements and *petite guerre* over the risk of a major battle.<sup>81</sup> The bloody failures of the last war had clearly left their mark on Frederick's thinking. In order to counter Austrian artillery firing from strong positions, he wanted free battalions to advance in open order to draw the artillery fire on them. Line infantry could then follow safely in their wake to effect a breakthrough. Long-range artillery fire, particularly by howitzers, should support the attack. Though Frederick discussed combined arms combat in order to strengthen the tactical offensive, the invention of the all-arms division and its use in battle by Prince Henry and the Duke of Brunswick had evidently escaped his attention.<sup>82</sup>

Frederick's novel interest in open-order tactics even made him suggest that some line infantry should fight as skirmishers if need be. In spite of the fact that skirmishing calls for increased reliance on positive motivation, his views on morale and motivation were expressed in the notion that the common soldier should be more afraid of his officers than of the enemy.<sup>83</sup> He seemed to have forgotten his earlier ideas about positive motivation.

Frederick also continued in his theme of improving officer training. Since officer casualties would be very high in the next war, each officer had to be competent enough to take the place of his superior without further preparation. For this purpose, all subalterns had to attend lectures, mainly on fortification. Those officers who studied military science and history on their own initiative would improve their prospects for promotion.<sup>84</sup> He also continued in his efforts to train a corps of staff officers. Young, promising officers should be trained in staff work and quartermaster tasks. Autumn manoeuvres, apprentice pieces in field fortification, mock battles and diverse tactical exercises would introduce them to the art of command.<sup>85</sup> This comprehensive training scheme suggests that Frederick wanted to raise general officers who were more capable of independent command than many of those who served him in the Seven Years' War.

Frederick's analysis addressed shortcomings in *petite guerre*, reconnaissance, tactics and officer training. He did not, however, find ways to overcome limitations inherent in the use of unitary armies and dependence on rear supply. The operational potential of Prince Henry's divisions did not fire his imagination.

Lloyd was content with reiterating the old distinction between the mechanics and mathematical foundations of military science on the one hand, and the higher reaches of



the military genius on the other hand. He also tentatively defined tactics as the deployment of troops for combat. Silva identified the two levels of the art of war. ‘Strategy’ was the science of the general and dealt with campaign plans and the use of tactics to achieve their objectives. ‘Tactics’ dealt with formations, battlefield manoeuvres and the three arms. These definitions were already close to modern usage.<sup>86</sup>

Lloyd, like Santa Cruz and Saxe, recommended avoiding battles in favour of manoeuvres against the enemy’s communications. Manoeuvre was a substitute for battle rather than a means for achieving it. The selection of a ‘line of operations’ (*Operationslinie*), an imaginary line running from the magazine via the army to the objective, could decide the outcome of a campaign because an appropriate line of operation would permit to threaten the enemy’s communications whereas their own line of communications would be secure. In addition, light troops would conduct *petite guerre* against enemy communications. Lloyd held that the ‘Potato War’ of 1778, which had ended in a deadlock because the Prussians did not manage to manoeuvre the Austrians out of their positions and force them to battle, was evidence for the validity of his theory. Though Lloyd and Silva demanded the militarization of the supply train in order to increase efficiency and reliability, they did not suggest new ways of overcoming the dependence on rear supply: witness Lloyd’s obsession with the ‘line of operation’.<sup>87</sup>

Lloyd’s recommendation to avoid battle was based on his observation that tactical weaknesses of contemporary armies and the inherent shortcomings of linear tactics rendered battles costly and rarely decisive.<sup>88</sup> The solution suggested by him, reminded of Saxe and Folard: deeper formations, line infantry armoured and armed with pikes, lances and muskets, and fire support by light infantry.<sup>89</sup> Possibly following his observations of the 1778–1779 campaign, he held that artillery caused more noise than harm and should be discarded for the sake of improved mobility.<sup>90</sup> With regard to training, he criticized his contemporaries for copying the spit and polish of the Prussian army without looking for deeper causes of the Prussian success. Soldiers should learn only what they would need on the battlefield.<sup>91</sup>

Regarding the theoretical foundations of generalship, both Lloyd and Silva considered arithmetic and geometry imperative since battle formations, lines of operation and marches were a matter of mathematical calculation. Silva even used a sophisticated formula to calculate shock action.<sup>92</sup> Nonetheless, both insisted that the general also had to understand the human factor in matters such as fear, honour and morale.<sup>93</sup> In this context, Silva referred to the divisional organization. He saw the main advantage of permanent brigades and divisions in their propensity to foster *esprit de corps* and mutual understanding among the different arms within the formation.<sup>94</sup>

Bourcet contributed neither to military terminology nor to tactics. His lasting achievement, however, was his understanding of the divisional system’s operational potential. The army should advance in several divisions on parallel routes. Lateral communications had to be available to provide mutual support. With the armies advancing on a broad front, several objectives would be simultaneously threatened. Since the enemy would not be able to identify the objective of the movement, he would be unable to focus his defence on the true objective.<sup>95</sup> The operations plan should have many branches and accommodate all contingencies. The flexibility of the plan combined with the operational flexibility of the divisional system ought to permit rapid adaptation to circumstances. If one branch of the original plan could no longer be executed, the specific

tasks of the divisions could be swapped in an instant because all divisions were equally suited for a variety of assignments.<sup>96</sup>

Bourcet understood that parallel advance in columns would no longer permit the commander to control his army virtually single-handed as if it were still operating in one block. Consequently, Bourcet called for a staff system to coordinate the movements of the divisions. The chief of the general staff (*Maréchal Général des logis*) would play a key role. He had to draft the complex campaign plan including all contingencies and alternatives. He had to centrally direct reconnaissance and intelligence gathering. He should organize supply and reinforcements. He ought to maintain contact with each division and minor detachments. He had to not only merely prepare marching tables and draft the order of march, but also make a plan for battle. In short, the chief of staff was supposed to take over as many of the commander's tasks as possible, leaving only fundamental decision-making to him. In order to fulfil these functions, he had to be highly qualified in the art of generalship. His assistants, the staff officers, should also be carefully chosen and well trained in military correspondence, administration, organization, reconnaissance duties and map-making. The need to adapt to divisional organization applied to both the staff system and the signals services. In order to maintain rapid communication, signal stations should be placed on mountain tops.<sup>97</sup>

Guibert defined strategy and tactics in a way different to Silva's. '*Tactique élémentaire*' dealt with formations, training and battalion level exercises, whereas '*grande tactique*' also called '*stratégique*' or '*tactique des armées*' dealt with marches and order of battle.<sup>98</sup>

Like Bourcet, Guibert understood the operational potential of the divisional system. Divisions should advance on a broad front to ease supply problems, to outflank the enemy, to hide the true objective of operations and to remain unpredictable. Like Bourcet, Guibert pointed out that divisions could swap their assignments due to their uniform and versatile organization.<sup>99</sup> Guibert also realized, unlike Bourcet, who had still clung to the orthodox system of supply, that cutting loose from rear supply would increase operational flexibility even more. If troops lived off the country, harvesting the crops in the field and grinding the grain as the Romans had done, lines of communication would lose much of their importance—a favourite theme also of Saxe. This would permit the army to penetrate deeply into enemy territory since fortresses could now be bypassed. In order to further increase operational mobility, artillery and baggage had to be much reduced.<sup>100</sup> Since the enemy would still depend on lines of communication, light troops should wage *petite guerre* against them. In order to improve prospects for success in *petite guerre* and reconnaissance, light troops would have to be of high quality.<sup>101</sup> Like Bourcet, Guibert also realized the need for a skilled staff to coordinate the movements of the divisions.

Guibert's theory is particularly important for the 'discovery' of the operational level of war. He sensed that the tactical and the strategic levels would merge once divisions were used in manoeuvre in the theatre as well as on the battlefield. By dividing tactics into '*tactique élémentaire*' and '*tactique des armées*' he alluded to the increasing proximity between the strategic and the tactical levels. This impression is reinforced by his definition of '*tactique des armées*' which discussed both marches and battles. Silva's definitions were more adequate for the analysis of warfare up to this time, because two levels were sufficient for the analysis of Frederician warfare. Guibert, in contrast, had an

analytical outlook more adequate for the coming decades of warfare. He demanded that the duality of marching and deploying for battle should disappear. Divisions would be operational formations for the march as well as tactical formations for battle.

The difference between de Broglie's use of divisions and the way Guibert suggested for using them was obvious and important. De Broglie organized the march of his divisions in a way that they would be able to deploy and fight in standard battle formation. Tactics dictated the movement and even the whole purpose of divisions. Guibert, in contrast, called for the tactical positioning of divisions on the battlefield to be the consequence of the operational design. In other words, Guibert turned de Broglie on his head: 'The movements by which the army passes from marching order to battle order are so closely related to the *design of the marching order*, that they must be considered to be one and the same operation.'<sup>102</sup> [italics added]

Guibert also contributed to tactics. His *ordre mixte* was to terminate the quarrel between the proponents of the *ordre profond* which relied on deep formations and cold steel, such as Folard, Saxe and Lloyd, and those of the *ordre mince*, the conventional use of linear formations which relied on firepower. Infantry and cavalry would fight in line or in column according to the ground and the intentions of the commander. Attacks through broken country and on defensive positions, for instance, would be conducted in columns. In the column attack, light and line infantry would cooperate, with the light infantry preceding the column in open order to draw the enemy's fire, a procedure already suggested by Frederick. Artillery, organized in an artillery reserve and artillery detachments attached to infantry divisions, would form grand batteries (*grosses batteries*) to give either static or mobile fire support. In order to improve the cooperation between the arms, officers should have some knowledge in arms other than their own. Unlike Saxe, who called for all-arms 'legions', Guibert clung to de Broglie's organization of cavalry and infantry divisions.<sup>103</sup>

Since he seems to have regarded defeat in the Seven Years' War as the result of total failure of the French state and society rather than purely military short-comings, he not only discussed military matters but made his work a major critique of the French state and society. The people, Guibert wrote, did not take any interest in the wars of their kings. Since the population was not only indifferent but also soft and cowardly, soldiers were recruited from the scum of the population. Warfare was slow and indecisive not only due to the dependence on rear supply and the encumbrance of the artillery train, but also because troops as well as commanders lacked vigour and determination. In order to transform the conduct of war, state and nation would have to be reborn.<sup>104</sup> Like Saxe, he wanted the new nation to be warlike. The nobility would become the true nobility of the sword once more. A war should be a national war, the army should be a national army.<sup>105</sup> Following the Roman example, large training camps should be established not only to train troops and senior officers but also to instil martial virtues.<sup>106</sup> Like Saxe, he wanted the army to be a small army of high quality. Like Lloyd, he demanded that appearance should not be the benchmark of quality. Instead, drill and training should be pruned of everything impractical and superfluous.<sup>107</sup>

### **The French army: 1763–1791**

Not least due to the rapaciousness of the court nobility, the war left a legacy of state debts. When debt service consumed more and more revenue, and when the financial crisis began to spill over into an economic crisis by way of rising inflation, volatile interest rates and a decline in investment, the need for reforms became obvious. Turgot, one of the most radical reformers, considered a thorough re-engineering of state and society necessary to bolster the monarchy and to restore economic stability. Turgot's key idea was to create institutions of self-administration and, simultaneously, educate and enlighten the population in a way that society would regulate itself. When social antagonisms faded, the king would be liberated from the need to intervene and to take sides in the squabbles of factions, strata and corporations. In order to reduce the potential for social conflict, privileges should be curtailed in favour of legal and civic equality. With his programme, Turgot instrumentalized ideas of the Enlightenment in support of rather than in opposition to the monarchy. An important step in this direction would be the abolition of tax privileges in favour of a common tax code.<sup>108</sup>

Tax reform proved to be a step into a hornet's nest. The level of taxation was not particularly high, but due to the crudeness of tax administration in this period, the distribution of taxes was unjust. The proposed tax reform was considered to make matters even worse. Most of the lower nobility and the Third Estate had to pay very high taxes, whereas the high nobility got off relatively lightly, which did not prevent the latter from feeling threatened with regard to their tax privileges. The lower nobility, in turn, tried to pass on the tax burden to their peasants, who were already hard hit by bad harvests. The middle classes were not only outraged by taxation, but also frustrated in their economic and social ambitions by guild monopolies, tariffs and rigid social stratification. The urban proletariat was in a volatile mood due to rising bread prices. Feeble reform attempts encouraged rather than mollified discontent. Most of the nobility and the Third Estate wanted to wrest tax authority from the king, the middle classes hoped for a free economy, the peasantry demanded lower feudal dues and the urban proletariat cried for cheaper bread. Finally, the Revolution would succeed because all of these social groups would attack the old regime simultaneously, each for its own reasons.<sup>109</sup>

Another area of reform was the French army. The shame of Rossbach in particular incensed the officer corps and made them join the chorus of the discontent, even though they had little cause to complain. After all, their expensive and inefficient services at least partly accounted for the outcome of the war. Subsequent military reforms saw the French army become probably the most modern of the European armies. The foundation for the revolutionary armies' military successes in later years was laid in this period. Unlike many European armies after the Seven Years' War, the French military establishment did not model its army on the Prussian example. National pride induced ministers and officers to innovate rather than copy from the victorious enemy, even though Prussian regulations were reluctantly studied.<sup>110</sup>

Reforms aimed at increasing professionalism in the army at every level. Proprietorship of regiments and companies was abolished. Wealth was no longer a precondition for the rank of colonel or captain. Instead, professional competence was emphasized. Military

schools for officers of the line were established; specialist schools for artillery and engineers were improved. Bourcet founded a general staff and devoted himself to training officers at a staff academy. Military theory enjoyed a hitherto unheard-of attention, and the volume of military literature soared.

The attack on wealth in favour of merit, however, did not create equal opportunities in the officer corps. Though poor nobles no longer saw their career cut short by wealthy commoners or the high nobility buying units and ranks, talented commoners saw their way into the officer corps, even the corps of the technical branches, still barred. Only by promotion from the ranks could they achieve the commission. The new mode of selection incensed ambitious commoners without reconciling the low nobility. The subsequent ill feeling in the French army would play its part in the events of 1789. Another reform tackled the supply system, one of the French army's Achilles' heels. Instead of depending on corrupt contractors and the inefficient supply administration (*régie*), the army would now supply itself with food, forage and equipment.<sup>111</sup>

Naturally, attacks on privilege and corruption were violently, and often successfully, resisted by those who had profited from the old system. A reduction of the expensive and bloated officer corps, for instance, was politically not feasible. In 1775, there were still 1,200 generals in the French army. Prussia had 80 generals for an army of the same size.<sup>112</sup> The court nobility also clung to their predominance in senior rank, frustrating many deserving but lesser nobles.<sup>113</sup>

Relations between army and nation were also far from Guibert's ideal of the national army. Soldiers remained as despised as ever. At the entrance of public parks there was still the sign 'No dogs, no prostitutes, no soldiers.'<sup>114</sup> Pacifist currents of the Enlightenment took a very unfavourable view of the mercenary army as the king's pawn. Philosophers such as Voltaire and Rousseau envisaged a national citizen-militia and questioned the legitimacy of the royal army.<sup>115</sup> Army and society were physically segregated since more and more troops were housed in barracks.<sup>116</sup>

In spite of old and new shortcomings, the French army gained in military effectiveness. Besides increasing professionalization, the Gribeauval system of artillery, the adoption of Guibert's *ordre mixte* and the divisional system proved crucial.

Gribeauval reformed the French artillery, partly by adoption of technological innovation. The standardization of gun calibres and design of carriages and caissons unburdened supply services by facilitating interchangeability and ease of replacement. Guns became much lighter without loss of firepower. Hence, the number of horses per gun could be reduced, and the length of the artillery train shortened, both improvements permitting higher operational speed. On the battlefield, guns were now mobile enough to change positions swiftly and frequently, which enabled artillery, infantry and cavalry to practice combined arms combat. These improvements strengthened the attacker since the attack could now be flexibly supported by close-range artillery fire.<sup>117</sup>

The *ordre mixte*, part of the regulations of 1791, also contributed to increasing prospects for tactical success. Combined with the highly mobile Gribeauval artillery, the *ordre mixte* promised more dynamic battles, more efficient use of terrain, a higher degree of inter-arms cooperation and, consequently, a greater chance to inflict decisive defeat.<sup>118</sup>

The divisional organization, combined with Bourcet's and Guibert's operational theories, was probably the most important success of the reforms. The division had its own staff and a mix of either two brigades of two to three infantry regiments each, with

two batteries attached, or four to six cavalry regiments, with horse artillery attached. A weakness of this early form of divisional system was that divisions were not yet all-arms formations, a form of organization which rendered them less versatile and self-reliant than the all-arms divisions of a later period. The Wars of the French Revolution would witness the effectiveness of improved divisional organization.<sup>119</sup>

### The Prussian army: 1763–1791

Prussia emerged battered but victorious from the ordeal of the Seven Years' War. Even though limitations inherent in the nature of campaigning and battle had prevented Frederick from achieving decisive victory in battle, the Prussian army and military institutions had, by and large, proven themselves equal to the test. As a consequence, there seemed to be no reason for a reform programme as radical as in France.

Yet, minor reforms and adjustments were common under Frederick as well as under Frederick William II.<sup>120</sup> Following his own recommendations, Frederick continued to improve the organization of the general staff and the training of staff officers. Hand-picked officers learned generalship under the king's personal tutelage. They commanded large formations in autumn manoeuvres, built fortifications and learned the trade of the quartermaster. In spite of these improvements, the organization of military administration and command remained haphazard. There was still no clear distinction between the military and the civil spheres of government. The *Generaladjutant*, dealing with reviews, manufacture and infrastructure continued to straddle both areas. Only when Colonel Wilhelm von Anhalt united the position of *Generaladjutant* and general-quartermaster in his hands did the Prussian army have a chief of the general staff.<sup>121</sup>

The area of most active change was the field of tactics and tactical organization. Frederick's experiences with the superiority of Austrian artillery induced him to increase the number of guns to 6 per 1,000 men.<sup>122</sup> The price of this increase in firepower was a severe reduction of mobility as the uneventful campaign of 1778–1779 showed.<sup>123</sup> This lack of mobility was at least partly due to the failure to reorganize the artillery. Batteries were established from the depot during mobilization. Manpower was provided by infantry soldiers and artillery cadres drawn from different artillery regiments.<sup>124</sup> The drivers were still civilians.

Frederick also established three regular light infantry regiments in order to counter the Austrians' superiority in *petite guerre*. In battle, this light infantry was meant to serve as cannon-fodder in order to protect the line infantry advancing behind. This scheme was a direct consequence of Frederick's traumatic experience of seeing the flower of his infantry mown down by Austrian canister at Torgau.

Frederick William II continued the reform of the infantry. From 1786 onwards, each company had 10 rifle-armed soldiers trained as sharpshooters (*Schützen*). On the battlefield, they would fight in open order in front of the company. Off the battlefield, they would engage in activities of *petite guerre* such as piquet duty and ambushes. Similarly, cavalry units had 10 hand-picked men with rifled carbines. The establishment of 24 fusilier (*Füsilier*) battalions expanded the Prussian contingent of light infantry. Fusiliers were equally suited for *petite guerre*, for fighting in broken country and for firing in line. On the battlefield, they would usually fight in lines of two ranks. Since

fusiliers often fought in open order, they escaped the degree of supervision their comrades in the line were subjected to. Consequently, they had to be well motivated. This was indeed the case due to relations between officers and men being closer than in the line. The line infantry refined the tactics employed during the last war and enjoyed an increase of firepower with the invention of the two-sided ramrod and the conical touchhole. Whereas the infantry increased its capacity for light duty, the cavalry neglected the light service and specialized on the battlefield role.<sup>125</sup> This would prove to be a mistake in 1806.

The quality of the officer corps had suffered from the horrendous losses of experienced officers in the course of the three Silesian Wars. Commoners who had risen to officer rank during the war were replaced by foreign nobles of questionable loyalty.<sup>126</sup> Neither the quality of troops nor their morale could have improved when Frederick ordered his courts to sentence criminals to military service. In order to maintain discipline in an army of declining quality, punishments had to be severe. Increasing severity of discipline, however, was no constructive solution to discourage desertion which had seriously hampered the Prussian army during the war.<sup>127</sup> Nevertheless, the severity of discipline should not be exaggerated. Officers frequently led by example and positive motivation.<sup>128</sup>

For all the old and new shortcomings of the Prussian army, the ‘lightning’ campaign in the Netherlands, a swiftly and adroitly conducted police operation under the Duke of Brunswick, succeeded in restoring the former government in 1787. The ease and success of this campaign may have convinced the monarchies of Europe that French revolutionary armies, some years later, would not be a match to their professional armies either.<sup>129</sup>

## Summary

Before the end of the Seven Years’ War, military theory did not adopt a two-level model of analysis. Instead of differentiating between strategy and tactics, the term ‘tactics’ covered most of the art of war. Regarding the conduct of war, military theorists such as Saxe and Santa Cruz suggested avoiding battle in favour of siege warfare and manoeuvres against the enemy’s communications. Instead, Frederick’s strategy during the Seven Years’ War called for decisive battle in order to defeat multiple attacks by a superior alliance. Since this battle-seeking strategy was costly in manpower, Frederick had to mobilize Prussia’s manpower and material to the utmost. He was assisted by his country’s social and economic structures in his mobilization effort.

A particularly important feature of Prussian society was the symbiosis between king and nobility. The king could rely on loyal service and granted privileges in return. The link between economic and social structure on the one hand and military power on the other, however, carried its own limitations. Social change and economic progress, which would have enhanced Prussia’s warfighting capabilities in the long run, were suppressed in order to preserve the social and economic *status quo* of the nobility. The military talent and ambition of commoners was hardly utilized for the same reason. Mobilization was also limited in psychological terms because the king was adverse to stir his subjects into armed uprisings. In the army, the lack of positive incentives caused a high rate of

desertion, which had a deleterious impact on strategic effectiveness since the army had to rely on rear supply, tent bivouacs, and short marches in order to keep the men in the ranks. In sum, the interplay between military and non-military factors in some ways bolstered Prussian military power but in other ways imposed limitations.

Frederick's quest for decisive battle was frustrated by the conditions under which he conducted his campaigns: the combination of fortresses and light troops blocked deep penetrations into enemy territory which would have forced the enemy to fight in defence of his capital. Furthermore, the small size of Frederick's armies made deep penetrations risky due to their vulnerability to strategic consumption. Armies moved in unitary formation. This resulted in a slow advance, with the subsequent lack of surprise and limited opportunities to manoeuvre the enemy into a position in which he could be decisively beaten. The poor performance of reconnaissance, both cause and effect of the advance *en bloc*, also reduced prospects of gaining an advantage over the enemy. A low rate of advance, lack of surprise and lack of superior manoeuvre prevented Frederick from forcing battle on an unwilling opponent.

When the enemy decided to make a stand, he was usually in a strong position or enjoyed superior numbers. Due to Frederick's inability to outmanoeuvre the enemy, he had to attack frontally under least promising conditions. Even if he won the battle, the victory was far from decisive because he had little time to pursue the beaten enemy. Also, the beaten army was only one of many so that its loss would not be crippling.

Apart from the disadvantages inherent in unitary army advance, dependence on rear supply frustrated Frederick's designs for decisive battle. Rear supply depended on major roads and waterways which were often blocked by fortresses. Hence, the advance soon came to a standstill. Supply trains slowed down the army, reducing prospects of surprising and outmanoeuvring the enemy. They also rendered pursuit after battle difficult. First, because the lumbering trains dictated the speed of the pursuing army; second, because the enemy could retreat behind his fortresses, which, due to the pursuer's dependence on rear supply, could not simply be bypassed.

Frederick, enjoying the advantage of being military theorist and practitioner in one, made several attempts to overcome the limitations imposed by campaigning conditions. He experimented with a parallel advance in several columns and he tried to increase self-sufficiency in supply. These improvisations, however, did not offer permanent solutions because army organization remained unchanged.

At the tactical level, Frederick's quest for decisive battle was also frustrated. The enemy could get away at the last moment due to long deployment times of the attacker. If the battle did get under way, the lack of all-arms tactics and the attritional nature of battle permitted the enemy to conduct an orderly retreat, which was facilitated by Frederick's inability to cut the enemy's line of retreat by superior manoeuvre. Prince Henry's all-arms division was a promising solution, but it came too late to have a major impact on the war.

Unlike Frederick, the French court did not pursue a battle-seeking strategy. Instead, it followed the kind of cautious, siege-based strategy advocated by Santa Cruz. Consequently, its mobilization effort was much more limited. Whereas the interplay between military and non-military factors had in some respects a beneficial impact and in other respects a limiting impact on Prussian military effectiveness, non-military factors had an overwhelmingly deleterious influence on French military effectiveness. The



weakness of the French monarchy, the overbearing and disloyal nobility and the rule of coteries at court directly undermined French military performance in campaign as well as in battle. In issues such as professionalism, supply organization, tactical skill and training, the French army was clearly inferior to its Prussian adversary.<sup>130</sup> The French contribution to overcoming the limitations of warfare in this period was de Broglie's divisional organization. Since it was meant to be a tactical device only, its potential was inferior to that of Prince Henry's all-arms divisions. Yet, it was de Broglie who inspired military theorists after the Seven Years' War.

The Seven Years' War generally offered much food for thought. After his repeated experiences with the costly indecisiveness of battle, Frederick had become uncertain about the crucial role of battle in strategy. He did, however, suggest tactical improvements in order to render battles less costly in the future. Lloyd did not radically rethink warfare either. He clung to the theme of Saxe and Santa Cruz, to use manoeuvre as a substitute for battle. Silva's contribution rested in his definitions of strategy and tactics. At last, one military theorist had begun to analyse warfare on two levels.

Bourcet and Guibert radically differed from other military theorists insofar as they understood the operational potential of the divisions. They had realized that the use of divisions would overcome many of the problems which had frustrated Frederick's pursuit of decisive battle. Guibert was the more perceptive thinker. He realized that the wars of the future would see the merging of the strategic and the tactical levels, a development which ought to be reflected by the adoption of the three-level model of analysis. Besides, Guibert suggested enhancing the operational potential of divisions by cutting loose from rear supply. He also invented the tactics of the *ordre mixte* which complemented the flexibility and efficiency of the divisional system at the tactical level.

In the wake of the Seven Years' War, the cost of the war combined with the rapaciousness of the French nobility had created a mountain of debt which had to be reduced by a bundle of reform measures, particularly by tax reforms. The attempts of the government to carry out reforms combined with the broad-based opposition against their introduction as well as a general mood of dissatisfaction, resulted in the revolution which swept the monarchy away.

Whereas reforms of the state had failed, army reforms were much more successful. The increasing professionalization of the officer corps, the adoption of Gribeauval's artillery, Guibert's *ordre mixte* and, most of all, the divisional system, gave the French army a competitive edge in the coming Wars of the French Revolution. France now had operational instruments and Bourcet's and Guibert's theories as a guide to their use. The interrelation between military theory and practice in the evolution of operational art had become particularly obvious in the case of Guibert. Following the defeat in the Seven Years' War, he conceived military solutions and turned them into practical reforms.

Prussia, which had survived the war after a creditable performance, seemed to be in far less need of reform than the shamefully defeated France. Consequently, only minor reforms such as improvements of officer training and increasing reliance on light infantry were carried out. The potential of the divisional system had been overlooked.

The impact of the Prusso-French antagonism would become apparent in the Wars of the French Revolution. By dint of military reforms, the French army had gained an advantage over the adversary in the coming war, whereas the Prussian army remained wedded to Frederician warfare.

## 2

# MILITARY THEORY AND PRACTICE: 1792–1806

This chapter will show to what degree the military theories of Bourcet and Guibert had left their mark on French military practice during the Wars of the French Revolution. It will be discussed how, on the one hand, the interplay between military and non-military developments contributed to and, on the other hand, limited the evolution of French operational art. The chapter will demonstrate how operational instruments and improved tactics overcame limitations in warfare which had frustrated Frederick, yet still failed to deliver decisive victory in battle. Finally, the reaction of Prussian military observers experiencing the new form of warfare will be discussed.

### **Military practice in France: 1792–1799<sup>1</sup>**

#### *The strategic level*

Different political factions had machinated for war for their specific purposes. The *Girondins* hoped that war would sweep away the constitutional monarchy and open the way for a republic. The royal court hoped that the position of the monarchy would be strengthened by the expected defeat of the revolutionary armies. General Dumouriez wanted to conquer Belgium and turn it into his personal realm. General Lafayette planned to beat the allies and then to march on Paris at the head of the army in order to restore the monarchy. The *Montagnards* were opposed to war because they feared the kind of caesarian coup that Lafayette was planning.<sup>2</sup>

The Pillnitz declaration of August 1791 and the Prusso-Austrian alliance of February 1792 were not only considered intolerable provocations, they also offered a convincing pretext for war. The National Assembly duly reacted with a declaration of war. When the first campaign had miscarried and allied armies were advancing into France, carrying with them the threats spelled out in Brunswick's manifesto, the defence of France and the Revolution as well as the liberation of other nations was defined as the war aim. By 1794, when the most immediate dangers had passed, the time-honoured designs of conquest for the purpose of French security as well as exploitation became the new war aim.<sup>3</sup> The war had been a truly national war only as long as France had defended her own territory.<sup>4</sup> When the enemy had been driven from French soil, it became a war of conquest to enrich

the government as well as the army. This change of policy could be justified by the behaviour of ‘liberated’ peoples. The apparently unenlightened and ungrateful nations which had not welcomed the blessings of the French Revolution, including such mixed blessings as *guillotines* and contributions, should pay for the war. Idealism gave way to cynicism; liberation was replaced by exploitation.<sup>5</sup>

The years 1793 and 1794 were crucial for the emergence of operational art. In 1793, the fate of the Revolution seemed sealed. The combined threat posed by counter-revolutionary rebels on the one hand and foreign armies on the other hand appeared overwhelming. In this desperate situation, in which the achievements and benefits of the Revolution were at stake, a radical group seized power and began to introduce measures equal to the threat.<sup>6</sup> This situation was not much different from Frederick’s during the Seven Years’ War. Both the Committee of Public Safety and Frederick were fighting against long odds for their personal hold on political power as well as for the political order and status of their country. Like Frederick, the revolutionary government saw its salvation in the most intensive and determined conduct of mobilization as well as war.

The Revolution was fighting for its survival. It would only survive, the Committee assumed, if domestic and foreign enemies were annihilated.<sup>7</sup> Dumouriez’s strategy of fighting and negotiating, which had driven the Prussians out of France in 1792, was replaced by Carnot’s strategy of annihilation. The decree which forbade commanders to give quarter to British, Hanoverian and *émigré* troops was but one expression of this attitude of extermination.<sup>8</sup> Faced by a formidable array of enemies from all sides, the government had to dispatch them quickly, one after the other. There was no time for complicated manoeuvres and prolonged wars of attrition. Whereas *colonnes infernales* had to deal with domestic enemies in the Vendée, Toulon and elsewhere, the field armies had to destroy foreign armies in battle.

Operational art was intended to manoeuvre an enemy army into a corner where it could be wiped out before turning to the next enemy. Expressions such as ‘*destruction complete*’ and ‘*entièrement exterminée*’, had become Carnot’s favourites. Even when France’s situation had become less desperate in subsequent years, France continued to rely on operational art since this mode of warfare had been proven effective.<sup>9</sup>

In contrast to the French government, allied governments showed far less determination in subduing the enemy because they spent as much time squabbling among themselves as Frederick’s enemies had done. Other matters such as the partition of Poland, Russo-Austrian rivalry in the Balkans and balance-of-power politics among Prussia, Austria and Russia enjoyed priority over defeating France.<sup>10</sup> Their very lack of single-mindedness paradoxically saved the allies from a crushing defeat. Since they committed only relatively small armies, the French could only destroy small numbers of troops even if they won a major victory.<sup>11</sup> This problem had also been familiar to Frederick. Taking into account that the coalition controlled a considerable amount of manpower, with Russia and Great Britain being prepared to enter the war in order to maintain the balance, even a battle of annihilation could not have been decisive.<sup>12</sup>

When the survival of the Revolution seemed at stake, the French reacted with total mobilization, not unlike Frederick had done under desperate circumstances. Like Frederick, the revolutionary government mobilized for a battle-seeking strategy which could be expected to be costly in manpower. Whereas French mobilization during the Seven Years’ War had been hampered not only by unambitious war aims, but also by the

weakness of the king, the Committee of Public Safety was powerful enough to aim for total mobilization of manpower, material and spiritual forces. Whereas Louis XV had to deal with interest groups and coteries, the Committee was not daunted by opposition. It had both the strength and the determination to crush resistance to total mobilization.<sup>13</sup>

All mobilization efforts had to be coordinated. Carnot played the key role in the central direction of the war effort. He supervised the allocation of resources to army, population and industry. He organized the establishment of gun foundries and arms manufactories, the supply of labour and raw materials. With this range of activities, Carnot helped to create the conditions, ranging from mass mobilization to the strategy of annihilation, from which operational art would emerge. Besides, he was the directing spirit of all military operations in all theatres of war.

The territorial and administrative reorganization of France in *départements*, which deliberately ignored the boundaries of tradition, history, dialect and customs, not only served the purpose of destroying provincial identity in favour of a national identity, they were also intended to improve administration and, in this way, support the war effort.<sup>14</sup> Whereas Louis XV had dared neither to gear the economy towards war nor to increase taxes for fear of unrest, the Committee was not very concerned about economic, financial and social costs of mobilization, though some populist policies were adopted. The war had to be won; everything else was of secondary importance. Whereas *Girondins* were leaning towards a free-market economy, the *Montagnards* did not hesitate to intervene in every economic detail important for the war effort.<sup>15</sup> Only when Robespierre had been toppled in 1794 could state intervention be reduced and a freer economy be restored.<sup>16</sup>

Agriculture suffered from conscription at a time when food production was already insufficient. Farmers tried to avail themselves of labour by harbouring deserters, a practice which reduced the effectiveness of conscription and brought the rural population in open conflict with the state. The requisitioning of horses and transport, though theoretically restricted to redundant capacities, further under-mined agriculture. Manufactories were also badly affected: in 1791, 7,000 factory workers had been employed in Paris. By 1799, only 1,700 were left. The situation was similar in Lyon, where 13,000 out of 15,000 workshops had to close.<sup>17</sup>

Particular attention was paid to arms production. Prices were fixed for raw materials as well as finished products. Special representatives were appointed for specific tasks such as organizing the supply of saltpetre and increasing the output of arms manufacturing. Cobblers and tailors were ordered to produce shoes and uniforms for the army. Arms manufacturers were restricted to orders from the government. New gun foundries and workshops for muskets and sabres were established. Skilled workers were drafted into these manufactories.<sup>18</sup> Still, the substitution of pikes for muskets had to be considered because the production of muskets was insufficient. Likewise, civilians had to be asked to hand over their footwear and clothes because production of shoes and uniforms could not keep up with the demands of the mass army.<sup>19</sup>

Some economic policies rallied support for the defence of the Revolution but were harmful to the economy. Since the government was loath to collect unpopular taxes, the properties of the Church and *émigrés* were sold in order to fill the coffers. This measure, combined with agricultural reform, dispersed land among a multitude of proprietors. Though a large segment of the population now had a stake in the Revolution, the price was the creation of a large number of unprofitable farms. If military demands had

dominated land reform, a small number of large, efficient farms would have been created in order to produce supplies for the army.<sup>20</sup>

Manpower mobilization was conducted side by side with economic mobilization. Whereas Frederick had used the canton system merely to maintain army strength, and Louis XV had incorporated militia into the army for the same purpose, the *levée en masse* was meant to vastly expand army size. The *levée* was not the first levy. In 1791, 100,000 volunteers from the National Guard joined the army. They provided their own equipment and elected their officers. The 220,000 volunteers of 1792 were, in general, no volunteers at all. Each *département* was assigned a quota, and was left to its own devices on how to fill it. The levy of February 1793 was based on selective conscription. Bachelors between 18 and 40 had to draw lots. Those who drew a ‘bad’ number either had to serve, or they had to pay a substitute. This clause resulted in a veritable soldier trade in which substitutes were auctioned to the highest bidder. Though the levy of February was universal in theory, exemptions and substitutes ensured that most men would stay at home and leave the fighting to the lower strata of society.<sup>21</sup>

The idea of universal military service was not merely a desperate measure as Louis’s use of the militia had been, it was also an ideological imperative. Every citizen was to be the defender of his country. Everybody had to contribute to the war effort. Those who stayed at home would produce war material or supplies. Everybody else would fight. Consequently, in August 1793, the new, radical government initiated the famous *levée en masse*, a conscription law which did not permit substitutes. In this way, 300,000 men were called up. The *Loi Jourdan* of 1798 reintroduced substitutes again.

The idea of universal service was largely in line with the demands of theorists such as Saxe and Guibert. The difference was that Saxe and Guibert saw universal service as a means to unify army and nation, neglecting the aspect of building a mass army.

Louis XV’s fear that universal service would cause domestic unrest was vindicated in 1793. The conscription law of 24 February 1793 triggered the uprisings in the Vendée and elsewhere. This rendered conscription partly counterproductive. Only half of the 300,000 men envisaged could be raised. Furthermore, many of these troops were needed to suppress revolts or to chase draft dodgers. The levy of 1798, meant to provide 200,000 men, produced only 35,000, whereas it took 55,500 troops to crush the revolts against the draft. The conscription laws pitted the army against large sections of the population. Resistance ranged from draft dodging and harbouring deserters to open revolt. The government’s recourse to *dragonnades*, ill-famed since the time of Louis XIV, rendered the image of the citizen-soldier a sinister joke.<sup>22</sup> Nevertheless, by early 1794, army size had increased to at least 750,000 men.<sup>23</sup>

The revolts following the February draft rendered France’s military situation even more desperate, since the Revolution was now threatened from within as well as outside. The consequences were the ascendancy of the Committee of Public Safety and the adoption of the strategy of annihilation. The military situation of early 1793 had called for total manpower mobilization. The conscription effort of February had aggravated the military situation by arousing domestic opposition. This worsening situation resulted in a strategy of annihilation, operational art following in its wake, which was even more dependent on mass mobilization and aroused even more domestic unrest—a vicious circle. As a consequence, operational art was even more desperately needed to crush the

growing number of enemies. Here, the interplay between non-military and military developments in the evolution of operational art is particularly apparent.

Mobilization did not stop with calling up scores of men. Talent and ambition could be mobilized as well. Since revolutionary ideology called for equal opportunities for talent, the officer corps was now open to everybody who could read and write. Merit would replace birth and wealth as the basis for selection and promotion. Entry examinations bore witness to a new emphasis on education.<sup>24</sup> Talent was to rise quickly to the top. Meritocracy was not only the ideological imperative in an egalitarian society, it was also a military necessity. The emigration of noble officers had reduced the formerly bloated officer corps to a skeleton. New officers had to be found rapidly. Since the aristocracy was no longer the chief source of officers, other classes had to be admitted.<sup>25</sup> Even if aristocrats had not turned their back to France, the vast expansion of the army would have called for a corresponding expansion of the officer corps in any case. Though the meritocratic principle was not as consistently applied as envisaged, it opened the gates of the corps for an inflow of talent and ambition. This was to be the dynamic officer corps which corresponded to the new dynamic kind of warfare.

Intellect and talent were mobilized not only for the army, they were also called upon in the form of scientific efforts. Science was deliberately harnessed to provide the army with better and more effective arms and equipment. The balloon and the Chappe telegraph were two fruits of this drive. The first telegraph line was established between Paris and Lille in 1794. The military value of this line was questionable since Lille was so close to Paris that traditional means of communication were by no means rendered obsolete, as the amount of correspondence between the Committee and the Army of the North suggests. The balloon was of little use in battle though it had some utility in sieges. Field commanders regarded balloons not worth the trouble and discarded them.<sup>26</sup> In contrast to the failure of the balloon, the telegraph became a crucial means of communication in the following decade.

Spiritual mobilization was a further field of activity. The difference between Louis's and Frederick's attitudes towards spiritual mobilization on the one hand, and the revolutionary government's attitude on the other hand could not have been more distinctive. Nationalist and revolutionary propaganda, in the form of pamphlets, songs, speeches, symbols, ceremonies and even a revolutionary calendar, were utilized to kindle sentiments to fever pitch. The recurrent theme was the interpretation of the war as the war of the nation rather than the war of the king and his army.<sup>27</sup> Saxe's and Guibert's dreams of seeing army and nation united seemed to have come true.

Not only soldiers' spirits should be raised, but also those of the rural population. Unlike Frederick, the revolutionaries were not afraid of seeing the population in arms. On the contrary, the French government encouraged all forms of resistance against the invaders. Guerrilla warfare waged by the French peasantry against the invaders seemed to meet these expectations. Yet, instances of guerrilla warfare were the reaction of the peasantry to immediate threats to their property, rather than outbursts of revolutionary enthusiasm.<sup>28</sup> Likewise, revolutionary propaganda regarding army composition should not be taken at face value. The popular image of the French soldier of the Wars of the Revolution as an enthusiastic citizen-soldier is misleading. True, in the levies of 1791 and 1792 there were scores of zealous volunteers who sung the *Marseillaise* on the way to

battle.<sup>29</sup> Unfortunately, they were often equally enthusiastic in running away as soon as the enemy appeared on the horizon.<sup>30</sup>

In fact, the army consisted of professional soldiers, genuine volunteers and often-recalcitrant conscripts. Those conscripts who actually reported for duty rather than hiding in the woods had to be marched to the front guarded like galley slaves.<sup>31</sup> Thus, in terms of morale, there was not much difference between the militiaman of 1760 and the conscript of 1793. With mercenary-type professionals and conscripts drafted by selective conscription increasingly dominating, the armies of the French Revolution and Napoleon were not much different from Frederick's mix of mercenaries and cantonists, though nationalism and hope for advancement considerably added to motivation.<sup>32</sup> Other, already familiar elements of positive motivation included the charisma of successful commanders, *esprit de corps* and good relations between officers and men. On balance, changes in morale were noticeable and important but cannot by themselves account for the changing nature of warfare.

Mass mobilization produced mass armies. This entailed several consequences. One consequence was that French armies now had the critical mass permitting deep penetration of enemy territory without being crippled by strategic consumption. In theory, though not yet in practice as the failure of the 1796 campaign showed, French mass armies could arrive in front of the enemy's capital in considerable numbers, forcing the enemy to give battle or to surrender his capital. Frederick's small armies, in contrast, would have been considerably weakened by strategic consumption, leaving them too weak for decisive battle at the enemy's gates.<sup>33</sup> Another operational consequence of mass mobilization was that armies had to be broken into divisions and later into corps in order to make them manageable, thus vindicating Saxe's notion that big armies could not be controlled.<sup>34</sup> In order to coordinate the movements of these semi-independent bodies of troops, a staff system became necessary. Thus, it was necessary to form operational instruments in order to break up the unwieldy mass army. The very existence of these operational instruments then reinforced the tendency to use operational art.

The strategic consequence of mass mobilization was the creation of a host so numerous that France could neither pay nor feed it. French armies had to conquer territory in order to maintain themselves.<sup>35</sup> Since conscription and the costs of mobilization had caused severe economic problems, conquest was also imperative in order to feed the homeland from the spoils. The war had developed a logic of its own: the military threat had forced the government to introduce conscription and to pay for mobilization. Conscription reduced the labour available in agriculture as well as in the trades, whereas military expenditure depleted the already empty treasury. The combined effect of labour shortage, blockade and military expenditure was economic disaster. Armies, forced by want of resources to invade more and more territory, perpetuated the dilemma by provoking a backlash by the former owners who wished to reconquer lost territories. This violent reaction, in turn, could be checked only by a large army. The war could not be stopped because it fed on itself. In the long run, this self-perpetuating logic of conquest turned the army into a professional army fighting on foreign soil, which followed its Caesar who could lead it to booty and glory.<sup>36</sup> Combined with the unpopularity of the government, which had enraged the population with disregard for religious customs, local traditions and provincial privilege by conscription and by the

restrictive demands of the war economy, the opportunity for a military *coup* was auspicious.<sup>37</sup>

### *The operational level*

In the context of the strategy of annihilation, operational art had to create conditions under which battles of annihilation could be fought. Whereas Saxe and Lloyd considered manoeuvre a substitute for battle, the armies of the French Revolution should use manoeuvre for the purpose of battle. In order to turn the ideas of Guibert and Bourcet into practice, operational instruments, a divisional system and a staff system, were needed. Both had been created in the aftermath of the Seven Years' War and had been improved in some respects since then. The divisions were now all-arms formations like those Prince Henry had used, comprising line and light infantry, cavalry and artillery. This was a significant improvement compared with the infantry-artillery and cavalry-artillery divisions of Guibert and de Broglie because all-arms divisions were true miniature armies capable of fighting minor battles on their own.

In theory at least, this provided significant operational advantages. Divisions could now be distributed over an even larger area because their increased tactical independence had also enhanced their operational security. A division was now able to fight on its own until other divisions came up in support. Distribution over a broader frontage implied that the flanks of an opposing unitary army could be easily enveloped. This envelopment could result in an attack on the enemy's communications and his line of retreat, and it could result in a combined attack on the front, flanks and rear. If an opponent tried to avoid battle, the leading division could fix him in combat while the other divisions approached and joined the battle.

The advance of divisions marching side by side also had the advantage of higher speed of movement since marching columns were much shorter than a unitary army on the march. The advance of a divisional army was far less predictable than that of a unitary army because there were many more possible combinations of manoeuvre. This inherent unpredictability of the divisional system made it easier to deceive an enemy regarding the true objective and to surprise him. The advance on a broad front had further advantages. The division's lines of communications were secure because the broad frontage of the divisional army rendered it very difficult to outflank it and fall on its communications. Even if the enemy managed to cut the communications of one division, those of the other divisions would still be open. Another advantage of the advance on a broad front lay in reconnaissance. Whereas reconnaissance in Frederick's unitary army had been hampered by the narrow frontage which was reconnoitred by the vanguard, the broad-front advance of the divisions provided operational intelligence on a broad swathe of country. Superior reconnaissance was advantageous for identifying the position and strength of the enemy army as well as its communications and flanks. The development of the corps system augmented the advantages of the divisional system because army corps, consisting of several divisions and an artillery reserve, were even stronger. Their increased strength permitted them to hold their own for even longer, so that they could be laterally distributed over an even larger area.

In order to reap the maximum advantage of divisional and, later, corps organization, coordination had to be ensured. Ideally, the divisions would march separately but quickly



concentrate for battle. The staff system, suggested by Guibert and Bourcet, offered the solution for coordinating operations. Without an adequate general staff and divisional staffs, divisions would have been dispersed rather than distributed. They would have operated with little attention to their neighbours, and they would have been beaten one by one instead of supporting each other.

Changes in the mode of supply added operational advantages. Though French armies were still supplied from fortress depots when they campaigned on French territory, lack of resources, lack of transportation, inclement weather and bad roads rendered this mode of supply often unfeasible.<sup>38</sup> If rear supply was no option, or when the army was operating in enemy territory, French commanders made a virtue of necessity. The frequent inability of France to supply her troops from the rear combined with the theoretical advantages of living off the country, as advocated by Saxe and Guibert, often induced the French to cut loose from rear supply and rely on the consumption of local resources, by requisition and contribution.<sup>39</sup> Keeping in line with revolutionary ideology, contributions should only be levied on the rich. Care should also be taken not to cripple the local economy by excessive demands. In practice, these finer points were rarely observed. Not only did the French armies carry off anything useful whenever a strategic desert should be created, orderly requisitions more often than not degenerated into outright plunder.<sup>40</sup>

Increasing population density, progress in agriculture due to more efficient modes of cultivation, stable feeding and the introduction of potatoes and turnips provided the necessary quantity of local supplies.<sup>41</sup> This system of supply was facilitated by the divisional and, later, the corps organization because troops were widely distributed, permitting them to consume the resources of a large area.<sup>42</sup> Here, a non-military development, the progress in agriculture, had a supporting impact on the evolution of operational art.

Fortresses were no longer as much of an obstacle as before. They could now be bypassed even at the risk of the garrison making a sortie on the lines of communications, because communications had become less important for supply. For the same reason there was no need to leave large corps of observation behind to keep fortress garrisons in check. Independence from rear supply also permitted the divisions or corps to use secondary routes which were not blocked by fortresses. Consequently, rivers, which had played an important role as supply lines in Frederician warfare, and the fortresses controlling them had lost much of their importance. The decreasing potential of fortresses to stop the army's advance rendered deep penetration into enemy territory possible, as Jourdan and Moreau's 1796 campaign demonstrated. Deep penetration not only made enemy resources available to the army, it also forced the enemy to give battle in order to protect his resources or even his capital.

French armies further enhanced the operational advantages bestowed by the consumption of local resources and the divisional system by jettisoning dead weight. Unlike Frederick's lumbering artillery train of 1778, Gribeauval's light-weight artillery provided considerable firepower without much encumbrance. The baggage train was also lightened. Though some revolutionary armies retained tents, the amount of luxury baggage was reduced.<sup>43</sup> The high degree of operational mobility and flexibility also increased prospects for devastating pursuit. Whereas Frederick's pursuit attempts had

been frustrated by supply considerations and fortress barriers, these obstacles were now less formidable.

Advantages bestowed by conscription further unshackled the army. Whereas Frederick had to be wary of long marches, night movements, winter campaigning, supply by local consumption and bivouacking without tents because all of these activities either offered opportunities to desert or increased losses due to sickness, French commanders had less reason to worry. They could tolerate men falling behind during marches or foraging and ‘forgetting’ to rejoin the army. They could tolerate a higher sickness rate due to winter campaigning, insufficient supplies and bivouacking under the sky. They could tolerate the desertion of scores of men who no longer suffered privations such as marching in winter without shoes. They could tolerate all this because conscription refilled the ranks. Though Frederick had also been very successful in mobilizing Prussia’s manpower, he could not have accepted such a degree of wastage. Here, the effect of non-military developments, social and political changes leading to the adoption of conscription, had clearly a supportive impact on operational art.

Whereas Frederick had often been frustrated by his enemies’ desire to avoid battle, France’s enemies were not notably battle-shy because they could, initially at least, rely on tactical superiority due to higher standards of training. The Austrians and Prussians were even eager to fight open battles against the less well-trained and disciplined revolutionary armies. The tactical inferiority of the French in the early battles was obvious from the fact that they only won if they enjoyed a three to one superiority as at Jemappes, or at least a three to two advantage as at Valmy, Fleurus and Hondschoote. Even with numerical superiority, the French lost on average twice as many men, in relative terms, as the allies in the early battles.<sup>44</sup> A further reason for allied eagerness to fight may have been the relative invulnerability of French lines of supplies which rendered manoeuvres against French communications futile. Therefore, the problem of French commanders in the first years of the war was to force the enemy to fight under conditions advantageous to the French rather than to force him to fight at all.

The solution was a combination of operational art and operational skirmishing. Operational skirmishing may be defined by an analogy with tactics:<sup>45</sup> at the tactical level, the line infantry fights in line on open ground, the light infantry skirmishes in broken terrain. In the case of operational skirmishing, the relatively well-trained and battleworthy divisions of the revolutionary armies used operational art, whereas the less battleworthy divisions harassed enemy forces in broken country. These two modes of warfare at the operational level could be combined. The operational skirmishing units threatened the allies’ lines of communications. The allies, in response, had to detach units in cordons in order to cover their supply lines. These detachments could then be attacked in broken country, where the advantages of the allied armies in regular set-piece battles were negated. Allied professionals had to fight in the same way as the ill-trained and undisciplined French levies lurking behind the trees.<sup>46</sup> Whereas conscription provided sufficient replacements for the revolutionary armies, the allies experienced difficulties in replacing their carefully trained professionals. While this attritional struggle was going on in the forests and mountains of the Ardennes, the Vosges and the Eiffel, the battleworthy part of the French army could operate in the open, using the advantages of operational art against the numerically inferior allied armies, which had been even more weakened by detaching troops to guard their communications.<sup>47</sup> The victory of Jemappes was largely

due to this combination. If the allies distributed the bulk of their forces in cordons in broken country in order to counter operational skirmishing, French divisions could be concentrated to achieve a breakthrough. If the allies took the initiative and advanced against revolutionary armies, their flanks and communications would be threatened by the operational skirmishing formations, forcing them, again, to detach units into broken country.<sup>48</sup>

Frederick's problems with the combination of fortresses and light troops were also shared by the allies. The old fortress belt of France stopped allied armies and forced them to settle down for the siege.<sup>49</sup> This increased their dependence on rear supply of food and ammunition. Increasing dependence on the lines of communications was an open invitation for operational skirmishing, again forcing the allies to send strong detachments into the woods and hills. This left the besieging army weakened and vulnerable to the counter-attack by a numerically superior relief army.

Whereas Frederician *petite guerre* had merely been a complement to regular warfare, operational skirmishing could amount to a substitute for regular warfare. It not only thwarted allied campaign plans, it also subjected their small armies to a rate of attrition which they could not sustain for long. Though the attritional nature of operational skirmishing produced results, it took much time. The strategy of annihilation called for rapid as well as crushing blows. With increasing experience and battleworthiness of revolutionary armies, operational skirmishing, the stopgap measure of a tactically inferior army, could be relegated to a secondary role. By 1794, the French armies were tactically efficient enough to rely on operational art and open battles, a conduct of warfare which corresponded more closely to the strategy of annihilation.

Carnot, the military expert of the Committee of Public Safety, played a major role in implementing strategy. He also understood how operational art could be used to create conditions in which battles of annihilation could be fought. Carnot urged army commanders to reduce the number of garrisons in order to increase the size of the active forces. He advised the combination of operational skirmishing on a broad front followed by a concentrated breakthrough. He insisted on massing superior numbers for battle. He suggested bypassing fortresses rather than wasting time in besieging them. He demanded attacking and pursuing the enemy relentlessly until his forces were destroyed. He encouraged army commanders to coordinate their movements in order to render mutual support and to trap the enemy. Carnot's operational principles can be summarized as economy of force, deception, surprise, concentration, speed and annihilation.<sup>50</sup> Apart from giving detailed instructions to commanders of field armies, he consistently preached these principles. Particularly, economy of force had to be insisted upon. In September 1793, the Army of the Rhine had 52,000 out of 105,000 men in garrisons.<sup>51</sup> By May 1794, its garrisons had swollen to 60,000 out of 100,000.<sup>52</sup>

Carnot combined operational skirmishing and operational art. Operational skirmishing along the whole front left the enemy uncertain where the main blow would be struck and forced him to disperse his forces in a cordon. This cordon would then be broken by two or more armies advancing side by side like divisions. This approach threatened both flanks of the enemy army simultaneously. If the enemy split his army into two in order to meet the threats on each flank, the numerically superior armies would drive the enemy back in a series of battles and pursuits. If the enemy would stand his ground, both pincers would close in his rear and render his annihilation certain. The campaigns of 1794 in

Belgium and 1795 and 1796 in Southern Germany were planned along those lines. Yet, the outcome of these campaigns was often disappointing. Carnot's lack of complete success can be explained partly by the shortcomings of revolutionary armies and partly by his failure to adhere to his own principles. Particularly, the principles of economy of force and concentration were repeatedly violated by him in spring and summer 1794 as well as in summer 1796.<sup>53</sup> His use of two armies rather than one was also ill-advised since a swift enemy could beat them one by one as Archduke Charles demonstrated in 1796. Carnot should better have used one army only and relied on the superior manoeuvrability of its divisions to achieve the encirclement of the enemy.

Carnot directed the war effort as well as operations from Paris. Though this concentration of administrative and military control was generally advantageous for the war effort, it did not work as well as Frederick's concentration of political and military control had done. Whereas Frederick had been with the army, Carnot gave his orders far from the theatre. Though the Chappe telegraph between Paris and Lille permitted quick communication between armies in the north-eastern theatre and the capital, correspondence with armies in the Rhine valley still took about a week.<sup>54</sup>

Furthermore, Carnot's plans bore the imprint of plans conceived a safe distance from the front rather than in field headquarters. Consequently, his interference was not always beneficial. Sometimes, he deprived army commanders of whole divisions by shifting them to other armies in mid-campaign. Though he occasionally united command of the forces in one theatre in the hand of one commander, his frequent interference from Paris largely nullified the advantage of theatre command.<sup>55</sup>

Interference was a problem which generally bedevilled French commanders. The most massive form of interference was the institution of omnipotent 'representatives on mission' (*représentans du peuple*), who were attached to army headquarters.<sup>56</sup> These representatives had a mixed record. They cleansed the officer corps of ideologically suspect elements without being concerned about the subsequent reduction of professional standards due to the loss of experienced and qualified officers. Representatives openly encouraged soldiers to denounce their superiors, an opportunity which many individuals seized for personal reasons.<sup>57</sup> Strasbourg, for instance, lost all senior artillery officers at a time when siege seemed imminent.<sup>58</sup> Carnot himself had been such an eager cleanser during his time as representative that General Biron had to ask, on Marshal Luckner's behalf, for a list of suspended officers because he had lost track of who was still in command.<sup>59</sup>

Though most representatives did not go as far as Minister of War Bouchotte, whose hatred of nobles verged on insanity, purges removed scores of irreplaceable officers from divisional and army staffs.<sup>60</sup> Carnot even had to stop over-zealous representatives from crippling army staffs in mid-campaign.<sup>61</sup> A decree of 7 April 1793 displayed the same spirit of eager cleansing by prohibiting the promotion of *ci-devants* to general officer or staff duty, without considering that these officers were often the most experienced ones. Consequently, complaints about lack of qualified officers in general, and staff officers in particular, were commonplace.<sup>62</sup> Furthermore, purges poisoned relations between officers and men so that troops easily felt betrayed and ran.<sup>63</sup>

Since representatives had the power over life and death, generals faced the stark choice between victory and death. Consequently, they had to seek victory with more ardour than their Austrian and Prussian counterparts. These circumstances partly account

for the aggressiveness frequently displayed by French armies.<sup>64</sup> Yet, not even success was a safeguard, as the execution of Custine and Houchard showed. Competent officers, among them future marshals, avoided promotion because they did not desire to command in the shadow of the *guillotine*.<sup>65</sup> A situation in which the most talented officers dodged promotion nullified to some degree the advantages of meritocracy. Though representatives could force a competent officer to accept promotion, they sometimes preferred a good *sansculotte* to a good officer. The law of 21 February 1793, stipulating promotion based on seniority and election further undermined the meritocratic principle.<sup>66</sup>

Sometimes, representatives were useful in matters of supply and administration because they encouraged, or rather enforced, cooperation of civil authorities with the army. Yet, their presence effectively divided the command, which rendered it difficult for the military commander to follow his operational designs. During the Terror, for instance, the Committee maintained a more regular correspondence with representatives than with commanders. Even purely military matters such as operations plans were read by the representatives before they were passed on to the commander.<sup>67</sup> When representatives and army commanders cooperated, this arrangement did not cause much harm. When, on the other hand, they did not get along with each other, military efficiency was in peril. General Turreau, for instance, was obviously at the end of his patience when he demanded that either he or the representative should be recalled.<sup>68</sup>

Before representatives on mission undermined unity of command, unity of purpose, if not of command, was compromised by commanders such as Dumouriez who followed their pet projects, often for political purposes, rather than operate according to a common plan of campaign. The repulse of the Prussian army at Valmy and the subsequent invasion of Belgium were the outcome of his personal decisions without reference to the French government or even to his military superiors. Other generals, such as Custine, showed a comparable taste for independence. The problem of political interference and want of unity of command continued to hamper French commanders as it had in the Seven Years' War.

Other problems were also inherited from the old regime. Some French armies still used tents. Some were encumbered by loot and by numerous camp-followers, most of them wives and children. Carnot's appeals to rid the armies of this useless burden were defeated by a decree which permitted every soldier to marry without his superior's consent.<sup>69</sup> Supply vehicles had not entirely disappeared either because commanders liked to have a reserve of supplies at hand if the army had to be concentrated or the theatre was barren.<sup>70</sup> The cautious way of waging war could also still be encountered in Dumouriez's conduct of campaigns, in his combination of fighting and negotiation with the Prussian invaders in 1792. Similarly, Dumouriez failed to pursue the beaten Austrians after Jemappes.<sup>71</sup> Dumouriez's conduct of operations corresponded more to Santa Cruz's theory than to Guibert's, though the manoeuvres before the battle of Jemappes took some advantage of the divisional system. In the event, the faulty execution of d'Harville's outflanking move at Jemappes showed that the French had not yet sufficiently mastered operational art for the purpose of battles of annihilation.<sup>72</sup> Operations before Hondschoote also did not take sufficient advantage of the divisional system.

Jourdan and Moreau showed a better understanding of operational art, but they were not yet skilled and experienced enough to use operational instruments to maximum

effect. Moreau, for instance, dispersed his corps over a front of 145 km in 1796, which was beyond supporting distance in the hilly terrain. Consequently, he could not redirect the march of his army in time to come to Jourdan's support.<sup>73</sup> In the same campaign, Desaix's corps had to fight without any support from Moreau's other two corps when the Austrians attacked him at Ingolstadt. Though Desaix escaped defeat, this incident demonstrated once more that operational instruments were not yet handled with skill. It would take some more years until more competent use of army corps rendered them potentially war-winning instruments.

Also, some problems familiar from Frederician warfare still limited the range of French armies' successes. The often considerable baggage trains slowed the army in advance as well as in pursuit. Improper use of operational instruments still left the line of retreat open to the enemy. Some problems of the old regime had been solved. Privilege and tradition, for instance, no longer burdened staff officers because the new officer corps had no privileges and the new *demi-brigades* had no tradition.

Revolutionary armies, however, were not short of specific weaknesses. Reliance on local supplies could have a major impact on operations. The invasion of Holland in winter 1794, for instance, had begun as a scramble for enemy resources. Likewise, Custine's raid on Frankfurt in 1792 had been a large foraging expedition. French armies could hardly operate in some areas of the Rhineland because previous campaigns had depleted local supplies. This state of affairs caused Beurnonville, temporary commander of the armies of the North and the Sambre and Meuse, to suggest a combined operation of three armies, with the express purpose of conquering resources on the right bank of the Rhine.<sup>74</sup> When supply became a major problem, the destruction of the enemy army no longer enjoyed priority. For the same reason the ability of divisional armies to bypass fortresses and towns was ignored when commanders hoped to conquer magazines with food, ammunition and clothing. The capture of Düsseldorf by Kléber in 1794, for instance, was motivated by the town's depots of food and equipment.<sup>75</sup>

Another shortcoming was the poor quality of French cavalry, which was partly due to the exodus of cavalry officers and partly due to the amount of training and experience needed to form an effective trooper. This weakness enabled the numerically inferior allied cavalry to intimidate their French opposites and prevent them from conducting reconnaissance. Lack of proper reconnaissance may partly account for instances in which the divisional system was not effectively used for the conduct of operations into the enemy's flank. Though the French could to some degree counter their inferiority by attaching horse artillery to cavalry units, this was no adequate solution for the task of reconnaissance.

### *The tactical level*

Instead of uniting before battle and forming into line as de Broglie had envisaged, the all-arms divisions could join battle directly from the march. This quality permitted the commander to plan operations in such a way that divisions would arrive on the battlefield from directions most advantageous for the outcome of battle. The fact that all-arms divisions could operate detached from the main body of the army meant that they could be used for outflanking movements. At Jemappes, for instance, Dumouriez fixed the enemy in front with the bulk of his divisions, whereas d'Harville's division approached

from another direction and descended on the Austrian rear. An operational outflanking movement by a division would be transformed into a tactical outflanking movement as soon as the division entered the battlefield in the enemy's flank. In this way, the hybrid nature of the division as an operationally semi-independent as well as a tactically independent formation, made the manoeuvre off the battlefield merge with the manoeuvre on the battlefield, as Guibert had anticipated.

In battle, divisional organization permitted a considerable amount of flexibility since the divisional commander had units of all arms at his disposal in order to carry out an attack on his own initiative.<sup>76</sup> The French made good use of this flexibility at Hondschoote, Fleurus and Tourcoign. Divisions were not only useful in their own right as autonomous tactical formations, they also facilitated all-arms combat. This mode of combat gave the French armies a further tactical advantage. It permitted the divisional commanders to combine the specific strengths of the arms at their disposal. All-arms combat was further facilitated by the mobility of Gribeauval's guns since artillery pieces were now light enough to advance abreast of the attacking infantry and deliver timely and effective fire support.<sup>77</sup> Guibert's *ordre mixte* added a tactical advantage: the deployment of infantry and cavalry could now be flexibly adapted to the ground and the tactical situation. An attack in broken country, for instance, called for infantry columns of attack preceded by skirmishers, whereas defence in open country called for infantry in line, supported by artillery and skirmishers, the flanks protected by cavalry. The combined tactical result of divisional organization, all-arms combat, mobile artillery and *ordre mixte* was an army which could fight a dynamic battle in any kind of terrain, render strong positions vulnerable and restore the superiority of the attack. There was now the alluring prospect of overcoming the indecisiveness and attritional nature of Frederician battles.

Though generalizations on French tactics are difficult because terrain, battle conditions, relative strength and the skill of the troops and commanders involved varied, the ideal battle of this period can be summarized as follows: the French army drew up in two, sometimes three lines. A thick skirmisher screen advanced in open order, harassed the enemy with fire, targeted gun crews and officers and outflanked the enemy in order to rake him with enfilading fire. Once the enemy line had been depleted by skirmisher and artillery fire and the enemy had wasted much ammunition on the elusive *tirailleurs*, French infantry battalions advanced in columns of attack, adroitly using terrain for cover, while skirmishers continued to draw fire on themselves. This combination of columns and skirmishers had been a theme of Saxe's, Lloyd's and Frederick's writings. The flanks and rear of the advancing columns were protected by cavalry, which, in turn, was supported by horse artillery. Then, the columns tried to break the enemy's ranks by push of bayonet. If they did not succeed the first time, they repeated this procedure several times, until the exhausted enemy had to give way. When the enemy was in disorder, cavalry, again supported by horse artillery, attacked and tried to complete the rout. When the revolutionary army was on the defensive, skirmishers used the cover of hedges, ditches and walls to delay the attacker, whereas infantry battalions deployed into line in order to receive the enemy with volley fire, which was augmented by artillery. The task of cavalry, in this case, was the protection of the flanks.<sup>78</sup>

Tactics, though much more flexible and effective than before, still suffered from want of success in breaking the enemy formation. Frederician battle had been attritional due to

the mutual exchange of fire. Battles fought by revolutionary armies were still largely attritional with the difference that cold steel and firepower were now efficiently combined to wear down the enemy. French commanders had learned to fight and win battles in all kinds of terrain at limited cost, but the tactical hammer blow, crushing the enemy army to pieces, still eluded them. The use of all-arms divisions, advantageous in some respects, was disadvantageous in others. Divisional organization scattered cavalry and artillery. Consequently, artillery was not concentrated in batteries large enough to punch a hole into the enemy's front, whereas the mass of divisional cavalry was not sufficient to achieve a breakthrough.<sup>79</sup> Even the tactical independence of divisions could become a liability if the army commander lost control. At Neerwinden, for instance, Dumouriez realized only by nightfall that the divisions on his left had withdrawn.<sup>80</sup>

Pursuit was necessary to complete victory. Therefore, Carnot, the proponent of the strategy of annihilation, harangued his commanders to exploit each victory to the full.<sup>81</sup> Yet, for all the determination to give the beaten enemy the *coup de grâce*, French commanders found it difficult to execute this order. Some of the reasons for this failure, such as exhaustion in consequence of attritional combat and the failure to break the enemy's formation, were already familiar from the Frederician period. Other causes were specific to the revolutionary armies. Lack of discipline, for instance, made troops disperse in order to plunder or to rest.

Also, the frequently broken terrain of the battlefields permitted the enemy to withdraw from one defile to the next. Furthermore, the pursuit force *par excellence*, the cavalry, was inferior to allied cavalry. The combination of cavalry and horse artillery, potentially lethal for rearguards, was rendered partly ineffective because French cavalry needed the horse artillery to defend itself against allied troopers.<sup>82</sup> As a result of these shortcomings, pursuit was still not devastating.

French training had changed in line with tactics and the nature of the citizen army. The French army was composed of a mass of raw levies with a leavening of professionals. In order to turn this host into an effective force within a short time, drill had to be simplified and training shortened, both demands made by Lloyd decades earlier. Large training camps were established, an idea of Saxe and Guibert, in order to create *esprit de corps* and to have a large number of troops available for large-scale exercises of the kind Frederick had conducted in the 1750s. Combined-arms combat, in particular, could be practised under these conditions. These camps combined skirmisher training with conventional training. Since the camps were close to the border, some recruits could gain first combat experience in border skirmishes, while the rest underwent drill in the camp.<sup>83</sup> This mode of training made troops equally adept for open-order and close-order combats. The highly trained small armies of Saxe's, Frederick's and Guibert's writings were replaced by a hastily but realistically trained mass army. French soldiers were easily replaceable since commanders only had to wait for the next levy and to allow some weeks for training to fill the gaps. Under these conditions, increasing reliance on battle in the context of a strategy of annihilation was a reasonable option.

Unfortunately, training was disrupted whenever representatives removed efficient officers. Revolutionary ideology also undermined training efforts by its hostility towards drill and discipline, which were considered below the dignity of free Frenchmen. General Augereau, for instance, chided Macdonald because his command's discipline and proficiency in drill made it look too Prussian.<sup>84</sup> The use of the line formation was



considered reactionary, whereas columns of attack and reliance on cold steel corresponded far more to the ideal of the zealous citizen soldier. Officers who insisted on discipline were regarded as despots, a charge that could cost their lives. Denunciations were openly encouraged by representatives, so that soldiers could easily rid themselves of uncomfortably strict superiors. Furthermore, the practice of volunteers to elect officers was also not always conducive to discipline.<sup>85</sup>

With the fall of the Committee of Public Safety, interference diminished and the French army could return to professionalism. Even before the Thermidorian Revolution, the Committee had realized that discipline had to improve for the sake of military efficiency. Representatives, assisted by a new *Code Pénal Militaire*, were now called upon to restore the discipline which they had so successfully undermined.<sup>86</sup> Increasingly professional attitudes combined with growing military experience gradually turned revolutionary armies into competent forces which could confidently face their professional adversaries in the open.<sup>87</sup>

### **Prussian military theory: 1792–1806**

The enemies of revolutionary France did not fail to notice that a change in the conduct of war had occurred. Prussian theorists, however, differed in their conclusions regarding these changes in warfare and how the Prussian army had to adapt to the challenge. Berenhorst, Scharnhorst, Knesebeck, Decken and Bülow were among the most influential commentators.

Though Berenhorst's analysis was mainly based on observations of the late Frederician army, the Wars of the French Revolution had not failed to have an impact. The French example convinced him that the relation between army and nation was the key to success, a notion familiar from Saxe's and Guibert's theories. A close bond between state, army and nation was necessary for victory.<sup>88</sup> The army should be a citizen army of average size, supported by a mass militia. While the army would conduct regular campaigns, the militia would wage guerrilla warfare.<sup>89</sup> This idea of Berenhorst may have been influenced by the French combination of operational art and operational skirmishing.

Berenhorst emphasized the importance of the morale factor. Morale, already boosted by the bond between army, state and nation, should be further raised by introducing the meritocratic principle. Relations between officers and subordinates should improve. Coercion should be replaced by positive motivation.<sup>90</sup> The citizen soldier should not be a military automaton. Instead, training should be simplified and suited to the character of the citizen.<sup>91</sup>

Berenhorst also called for a more determined conduct of war. He had no patience with battle-avoiding manoeuvres of the kind advocated by Saxe and Lloyd. Instead, he wanted the army to march straight at the enemy and beat him in order to terminate the war with one blow. Golden bridges should no longer be built. Once the enemy was brought at bay, his army had to be destroyed.<sup>92</sup> This emphasis on short wars terminated by decisive battles of annihilation followed the same logic as revolutionary France's strategy of annihilation. It also reminds one of Frederick's emphasis on short, brisk wars.

In order to make rapid movements possible, Berenhorst wanted to see rear supply replaced by a large amount of provisions carried with the army, in order to reduce dependence on the lines of communications.<sup>93</sup> He failed to see that this solution to the supply problem would have increased operational flexibility at the cost of operational speed.

Unlike Berenhorst, his disciple Scharnhorst had first-hand experience of fighting French revolutionary armies. Though he interpreted French successes to be partly the result of allied want of determination, unity and skill, as well as advantages enjoyed by the French due to difficult border terrain and the fortress belt, he, like Berenhorst, gave much credit to the nation in arms. Indeed, he considered the involvement of the whole French nation in warfare a dramatic change in the nature of armies and warfare.<sup>94</sup> Social and political changes were the basis for France's military success. Army and nation, as Scharnhorst saw it, were united in their desire to destroy the enemies of their country. A single-minded and determined government coordinated the work of civil and military institutions and ruthlessly enforced cooperation and obedience where necessary.<sup>95</sup> The same thoroughness ruled in the army. Strict application of the meritocratic principle weeded out the incompetents to the advantage of the able and the ambitious.<sup>96</sup> Emphasis on positive motivation had increased French combat effectiveness.<sup>97</sup> The allies, in contrast, had shown an utter want of determination. Consequently, their mobilization as well as conduct of war had been lukewarm and ineffective. The root cause of this lack of zeal was a divergence of interests between governments and populations.<sup>98</sup>

Like Berenhorst, Scharnhorst demanded more determined preparation and campaigning. The state's manpower reserves ought to be mobilized to counter French mass armies. Prussia's selective canton system should be replaced by universal conscription. Prussian army and militia combined could amount to as many as 520,000 men. As a necessary concomitant of universal conscription, the martial spirit of the population should be aroused.<sup>99</sup> The army's mobility and speed should be enhanced by increasing independence from rear supply.<sup>100</sup> All-arms divisions should be formed in order to facilitate all-arms combat. The divisions should be supported by a strong cavalry reserve for decisive action.<sup>101</sup> Like Frederick, he wanted to see the beaten enemy pursued and routed.<sup>102</sup> Like Berenhorst, Scharnhorst had understood some elements of French military success, yet failed to understand the role of operational instruments and operational art.

Bülow's most significant contribution to military theory were his definitions of strategy and tactics which are still in current use today. He defined tactics as the science of movement within sight of the enemy army; he defined strategy as the science of movement out of sight of the enemy. He also expressed this relation in simple terms: tactics is about combat, strategy is not. Tactics would complete what strategy had prepared. Strategy would be implemented by tactics.<sup>103</sup>

There is also some indication that he, like Guibert, developed an understanding that the dispositions of manoeuvre and battle closely corresponded. Bülow wanted tactics to adhere to the same scheme as strategy, the concentric advance on the enemy's flanks. The approach march of the columns (*Kolonnen-Marsch*) to the battlefield was to be the link (*Überleitung*) from strategy to tactics. The *Kolonnen-Marsch* would largely determine tactical movements on the battlefield.<sup>104</sup> This notion should not be confused with de Broglie's use of divisions advancing in as many columns in order to facilitate rapid

deployment. Instead, Bülow, like Guibert, considered the tactical positions and movements on the battlefield to be the result, not the purpose, of manoeuvres on the approach to the battlefield. In other words, Bülow, like Guibert, understood that the line between the conduct of campaigns and the conduct of battle had become fluid, though Bülow's definitions did not yet allude to this close relationship.

Like Berenhorst and Scharnhorst, Bülow had much faith in the citizen army. His views of citizen soldiers as brave, loyal, motivated and intelligent, whereas mercenaries were scum remind one of Guibert's opinions on the subject. He also suggested establishing camps for training and inculcating military virtues. Like Berenhorst, Bülow demanded training and tactics to be suited to the citizen soldier. Drill and rigid linear tactics should be discarded.<sup>105</sup> Perfection in training would not be important because a numerically superior army would swamp a better trained but weaker army. This view contrasted with Frederick's notion that a better-trained army could overcome up to three times its own number.<sup>106</sup>

Regarding the conduct of campaigns, Bülow further developed Lloyd's theory of the base of operations. The campaign objective would be a geographic point, not the enemy army. The base of operations had to be chosen in a way that the enemy's communications could be threatened without endangering one's own.<sup>107</sup> In this context, he also reiterated Saxe's, Santa Cruz's, and Lloyd's caution that battle should be substituted by superior manoeuvre against the enemy's line of supplies.<sup>108</sup> Bülow incorporated new features of warfare, such as the corps system, into his theory. The army should advance with three corps on a broad frontage in order to protect the lines of communications as well as to outflank the enemy.<sup>109</sup>

Like Bourcet, he also thought that improved means of communications such as signalling devices were necessary to coordinate the movements of the corps.<sup>110</sup> Unlike Bourcet and Guibert, however, he failed to appreciate the key role of the staff system in operational art.

Bülow's views on supply were contradictory. On the one hand, he stressed the importance of secure communications which implies reliance on rear supply; on the other hand, he suggested, like Saxe and Guibert, living off the country and jettisoning the baggage train in order to gain speed and flexibility.<sup>111</sup>

Regarding tactics, he had understood the way French combined-arms tactics worked, though he had not grasped the importance of grand batteries. Bülow also understood that modern tactics called for the distinction between light and line infantry to disappear. In order to gain tactical flexibility, all infantry should be trained in the light as well as the line infantry role. The universal infantryman should take the place of both the line and the light infantrymen.<sup>112</sup>

Bülow's theory straddled the manoeuvre warfare school of Lloyd and the theory of operational art of Bourcet and Guibert. Nonetheless, parts of his work can be considered the first step towards Prussian operational theory. Unfortunately, he prejudiced the acceptance of his insights by including fanciful proposals. He suggested, for instance, that some infantry should be armed with scythes in order to mow heads. In another passage, he suggested making the infantry advance laughing rather than yelling in order to confuse the enemy.<sup>113</sup>

Like Guibert, Berenhorst and Scharnhorst, Decken, a Hanoverian friend of Scharnhorst, stated that army organization had to correspond to the nature of the state.

Unlike them, however, he did not call for a citizen army. A militia would fit a republic, a standing army would suit a monarchy.<sup>114</sup> He considered the Prussian monarchy and the mercenary army as inherently superior to republican armies.<sup>115</sup> Decken believed that a bond between army and people ought to be created without weakening the bond between king and army.<sup>116</sup> A limited degree of meritocracy and considerate treatment of soldiers should be introduced, without going so far as to change the social and political structures of the monarchy.<sup>117</sup> He considered meritocracy particularly important in the selection and promotion of staff officers.<sup>118</sup>

In contrast to Berenhorst, Decken had a low opinion of the use of militias in guerrilla warfare.<sup>119</sup> Unlike Berenhorst, Scharnhorst and Bülow, Decken had a keen eye for inherent weaknesses of republican armies. He noted that republican attitudes undermined discipline and professionalism.<sup>120</sup> He also observed that republican armies would not be citizen armies for long because the rich would evade military duties and leave fighting to the poor.<sup>121</sup> This point of criticism accurately described the selective practice of French conscription. His observation, however, was only accidentally correct because he had only superficially studied developments in the Wars of the French Revolution. Instead, he drew most historic evidence from antiquity and the wars of the seventeenth and early eighteenth centuries.

Decken regarded the armies of revolutionary France as standing armies, contradicting his statement that republics and standing armies could not coexist.<sup>122</sup> He attributed their military successes to the hard core of former royal army professionals as well as Robespierre's measures to restore discipline, whereas the undisciplined volunteers had, in his opinion, no part in the victories. France's supreme efforts for total mobilization had completely eluded him.<sup>123</sup>

Knesebeck, later to become *Generaladjutant*, keenly observed the French way of warfare, but he did not deduce any recommendations from his observations. Similar to Scharnhorst, he realized that the allies had to fight a whole nation rather than merely an army. He also agreed with Scharnhorst on the role of strategic advantages such as the French fortress belt, on the baleful effects of allied disunity, on the inadvisability of dispersing troops in cordons and on the link between individual motivation and open order tactics. At that time, however, he distrusted the loyalty of German militias.<sup>124</sup> A decade later, Knesebeck had turned into a radical reformer. In a memorandum, he suggested basing the Prussian army on reservists and militias. Only technical troops and cadres should be on a permanent footing. No less than 130,000 men should receive military training each year. After training, they would be grouped into three classes. The first class had to fill the cadres of the regular army. The second class served as a reserve for the first class. The third class was responsible for local defence. Alternatively, the second and third classes could wage a guerrilla war in support of the field army. The precondition of this military reform was political reform. The Prussian people should be transformed from indifferent subjects to citizens who identified with their state. Schools should play a key role in instilling patriotic and military values.<sup>125</sup>

Besides Berenhorst, Scharnhorst, Bülow, Decken and Knesebeck, there was a host of other Prussian and northern German officers who published their observations on the Wars of the Revolution in military journals.

Prince August of Prussia recognized the value of light infantry in broken country and suggested, similar to Bülow, that light infantry training should become universal

standard.<sup>126</sup> He was not impressed by the use of skirmisher screens in open country, however, because they could easily be dispersed by bayonet charges and cavalry attacks. He regarded columns of attack inferior to the line because he considered columns more difficult to manoeuvre. Besides, columns offered convenient targets for artillery.<sup>127</sup>

The light infantry officer Valentini saw the value of light infantry not only in broken country, but he also suggested adopting the French tactic of combining bayonet charges with skirmisher support. Since skirmishers had to fight in open order, where supervision was difficult, they had to be well motivated. In general, morale should be enhanced by better treatment of soldiers and the application of the meritocratic principle in officer selection and promotion.<sup>128</sup>

Like Valentini, his comrade Beulwitz recognized the need for lighter infantry as well as the necessity to rely on the initiative and motivation of the individual light infantryman. Regarding supply, he held that the Prussian army should refuse the French practice of requisitioning and plunder for humanitarian reasons.<sup>129</sup>

### Summary

To an even higher degree than Frederick, the government of revolutionary France was threatened by enemies from all sides. Like in Frederick's case, a strategy based on seeking decisive victory in battle seemed to be the solution. The high degree of mobilization necessary for the implementation of this strategy could be realized due to the strength of the Committee of Public Safety. Whereas the weakness of the Bourbon king had prevented full mobilization during the Seven Years' War, the power of the revolutionary government increased French military power, an example of the impact of non-military factors on military effectiveness.

The mobilization was total insofar as it covered all aspects, namely manpower, human resources, material and ideology. The outcome of this effort was the creation of operational instruments. Manpower and material mobilization produced mass armies which were broken into all-arms divisions and later into corps. Harnessing human resources by recourse to meritocracy and education provided an educated, ambitious and dynamic officer corps which was necessary to work the operational instruments, the divisions and their staffs and to conduct combined arms combat. Spiritual mobilization supported the acceptance of the war effort by creating an initial surge of enthusiasm.

Nevertheless, mobilization was not a complete success. Opposition from wide circles of the population to economic and social damage wrought by the war effort, as well as populist but uneconomic policies by the government limited the results of the mobilization effort. When the transformation of the army into a caesarian army, due to the self-perpetuating logic of conquest, was combined with growing opposition in France, time for a military coup had come. Here, military developments had a direct impact on non-military structures, namely the nature of the government.

The strategy of annihilation was to be implemented at the operational level by recourse to the use of operational art. In this context, Carnot played a major role. Operational art was meant to outmanoeuvre and corner the enemy as a precondition for his destruction in battle. The use of operational instruments, the divisions, corps and the staff system, combined with a new mode of supply, helped to overcome many of the

obstacles which had bedevilled Frederick's pursuit of decisive battle. Though this new mode of warfare was wasteful in manpower, this could be tolerated because conscription filled the gaps. Here, the interplay between non-military and military developments in the evolution of operational art becomes apparent once more: social and political changes, climaxing in revolution, had resulted in war. Defeat in war had brought a radical government to power which pursued a strategy of annihilation. This strategy called for total manpower mobilization by conscription. Conscription, in turn, made the conduct of operational art possible because the wastage of troops by ruthlessly giving priority to operational speed and flexibility over preservation of manpower could be tolerated.

Yet, for all the theoretical capabilities of the operational instruments, the aim of decisive battle of annihilation could not be achieved. Interference by Carnot and the representatives, lack of battleworthiness, continued lack of professionalism as well as unity of command, inefficient use of operational instruments, poor reconnaissance, the impact of supply considerations on operations plans and other weaknesses denied French operational art the crowning achievement of decisive victory in battle.

Whereas Guibert's operational theory was not very successfully turned into practice, his prediction that strategic and tactical manoeuvre would merge was fulfilled due to the hybrid nature of all-arms divisions, which were operationally semi-independent and tactically independent. Divisions also proved their use on the battlefield by facilitating the conduct of all-arms combat. Though battles were now less costly than in Frederick's time, combat was still largely attritional and pursuit also still lacked effectiveness. The want of success can partly be explained by ideological interference in training and leadership, an example of the deleterious impact of non-military factors on military progress. On balance, operational art could not deliver decisive victory in battle partly because early revolutionary armies retained some weaknesses of the old Bourbon army and partly because they merely replaced old shortcomings with new ones.

Naturally, Prussian military theorists tried to find the root causes of French military success. Berenhorst, Scharnhorst, Bülow and Knesebeck considered the concept of the nation in arms, the emergence of the citizen soldier who fought for his country, as the fulcrum. Berenhorst and Scharnhorst also understood that warfare had to be waged in a much more determined manner with more emphasis on combat than before. Yet, the emergence of operational art had gone largely unnoticed. Scharnhorst, for instance, understood the tactical advantages of the divisional system, but not its operational use. Only Bülow showed some awareness that the strategic and the tactical levels of warfare, both of which he had well defined, began to merge. He also understood some operational advantages of the corps system, but he still adhered to the belief that manoeuvre should be a substitute for battle. His theory straddled orthodox views on warfare, those of Santa Cruz and Lloyd for instance, and the new concept of warfare, proposed by Guibert and Bourcet. Other commentators were impressed by French light infantry and suggested increasing reliance on Prussian light infantry. In this context, they proposed enhancing positive motivation by the limited introduction of the meritocratic principle but failed to fully understand the extent of social and political changes behind France's military rejuvenation.

### 3

## THE JENA CAMPAIGN

The discussion of the Jena Campaign will show in what way French operational instruments had improved and how Napoleon and his marshals used these instruments, following the principles of Bourcet and Guibert, in the skilful conduct of this campaign. The strategic context and its impact on the success of Napoleon's operational art will also be analysed.

### **The strategic level**

Prussian mobilization in August 1806 presented Napoleon Bonaparte with an opportunity to destroy the military power of Prussia, which had demonstrated its latent hostility in 1805 by making common cause with Austria and Russia against France. Like Frederick in 1756, Napoleon saw his empire under threat from several hostile powers. To destroy one of them in an opportune moment, as Frederick had done in his pre-emptive strike against Saxony, seemed advisable.

Napoleon's strategy was also strongly influenced by his political position. He had come to power when the French nation had become unwilling to tolerate the war burden imposed by successive revolutionary governments. Bonaparte fulfilled the expectations of a population eager for peace by concluding his campaigns in 1800. When he crowned himself emperor, however, the legitimacy of his power became questionable. In 1805, the war with Great Britain, Austria and Russia ended the short period of peace, and the approaching war with Prussia would further undermine Napoleon's position as a deliverer of peace.<sup>1</sup>

His military coup, the usurpation of the imperial crown and the continuation of war eroded the acceptance of his power among the French public. Therefore, it was in Napoleon's interest to render war as little painful as possible to France. This aim could be achieved in two ways: first, the war had to be short. Second, the cost for the war had to be borne by other states. In order to achieve both aims, Napoleon had to defeat Prussia rapidly, and he had to be in a position to dictate peace terms, so that the vanquished enemy would be forced to foot the bill. Furthermore, the victory had to deliver plenty of spoils which would be distributed to the army and marshalate in order to maintain the loyalty of the military, on which Napoleon's power ultimately rested. In the event, the

gamble succeeded: the victory over Prussia and Saxony put Napoleon in the position to demand 159,425,000 francs in indemnities.<sup>2</sup>

Operational art offered the opportunity to achieve these strategic purposes. By the use of operational art, Napoleon had the chance to quickly manoeuvre the Prussian army into a position in which it could be destroyed. With the Prussian army crushed, peace terms could be dictated. Whereas the Committee of Public Safety had used operational art in the desperate defence of the Revolution, Napoleon was forced by the domestic imperative to achieve a rapid and inexpensive victory by heavy reliance on operational art. The domestic imperative is an example of the impact of non-military factors on the development and use of operational art.<sup>3</sup>

Another reason for relying on operational art to deliver a rapid victory was the fear of intervention. Revolutionary France had long been denied lasting success because she had to fight coalitions. Napoleon was luckier in this respect. In 1805, Austria had suffered her first defeat before Russia could intervene. At Austerlitz, Austria and Russia had been defeated before the Prussian army could join them. In 1806, it was desirable to subdue Prussia before Russia, Austria or Great Britain could come to Prussia's support.

In order to increase chances of dealing with Prussia only, Napoleon's diplomacy aimed at isolating the enemy. If a wedge could be driven between Prussia and her potential allies, the country would have to face Napoleon on her own. If Prussia could be defeated rapidly, potential allies would not even have time to reconsider and come to Prussia's rescue.

Napoleon negotiated with Great Britain, Russia and Prussia at the same time, which enabled him to play off one against the other. He had first come to an agreement with Prussia by ceding Hanover. The subsequent Prussian occupation of Hanover had provoked a declaration of war by Great Britain. After having successfully driven a wedge between Great Britain and Prussia, Napoleon tried to make peace with Great Britain by promising to assist in recovering Hanover from Prussia.

Relations between Russia and France were in a limbo since Russia had not yet ratified the Franco-Russian peace treaty. If Napoleon could persuade Great Britain and Russia to make peace with France, then Prussia would be on her own, since assistance from a still exhausted Austria was unlikely. Even if Russia and Great Britain would eventually decline the peace offers, Napoleon would still have won time to deal with an isolated Prussia.

After having deprived Prussia of support from any great power for the time being, Napoleon competed with Prussia for minor allies as well. The creation of the Confederation of the Rhine had spawned a host of French satellites, which owed their nominal independence, territorial expansion and rise in status to Napoleon. He reinforced this bond by depicting himself as the protector of the Confederation's members against a domineering and rapacious Prussia. The occupation of Hanover and Prussian mobilization lent credence to this interpretation. Furthermore, he promised the Confederation's princelings territorial gains at Prussia's cost. Not content with the support of the Confederation, Napoleon tried to woo Hesse-Cassel and Saxony, both potential Prussian allies, into his camp with promises of gains and protection.<sup>4</sup>

Napoleon's diplomacy was very successful: Prussia began the war with only minor allies which proved to be a liability rather than a support, whereas major allies were too slow in coming forward. Hesse-Cassel hesitated to commit herself, preferring to wait and



see before joining one side or the other. The vain hope that Hesse-Cassel would eventually throw her 10,000–15,000 men into the balance on the Prussian side, induced Prussia to keep the army close to the Hessian border, which proved to be a mistake. Saxony joined Prussia but mobilized no more than 18,000 of her 50,000 men, just enough to cause considerable Prusso-Saxon friction. The potential alliance with Hesse-Cassel and the real but worthless alliance with Saxony were strategically burdensome since the Prussian army had to be deployed on a frontage from the Prusso-Hessian border to the middle of Saxony in order to give both sovereigns a sense of protection.<sup>5</sup> This extended deployment increased the risk of being beaten completely. Furthermore, the west-ward shift of the Prussian positions for the purpose of covering Hesse-Cassel made it easier for Napoleon to outflank the Prussian army in the east. So, Napoleon's diplomatic manoeuvres had a direct impact on the success of his operational manoeuvres. Non-military factors, diplomacy in this case, had created conditions in which operational art could be used with utmost effect.

France's allies, in contrast to Prussia's, were very useful. The states of the Confederation of the Rhine fed and billeted the *Grande Armée* at their cost, provided 27,000 troops of their own and offered plenty of bases close to Prussian territory. Since these minor states were satellites rather than allies, Napoleon could help himself to their resources without having to take their interests and opinions into account. The practice of revolutionary France to prey on the resources of occupied territories in order to sustain French military power was continued under disguise. The satellites only posed a liability in so far as France was obliged to defend them, which, however, coincided with Napoleon's interests in any case. The French protectorate of the Confederation also reinforced Napoleon's quest for a rapid victory by use of operational art because their loyalty might become tenuous if the outcome of war seemed to hang in the balance for too long.

Napoleon's diplomacy achieved even more than isolating the enemy and providing the support of useful allies. In order to gain time for concluding peace treaties with Great Britain and Russia and winning the support of the German states, Napoleon used diplomacy to deceive Frederick William about his intentions as long as possible. He went to great lengths to soothe Prussia, express his desire for peace and assuage Prussian expansionism by confirming her control over Hanover and promising support for a Prussian-dominated North German League. He was brazen enough to make his last peace offer on 12 October, in the certain expectation that the next days would witness the destruction of the Prussian army.<sup>6</sup> The gamble succeeded: though Prussia had begun mobilization on 9 August, the Prussian army was still inactive and waiting for peace offers when the *Grande Armée* swept through Saxony eight weeks later. Thus, diplomacy combined with France's potential for rapid mobilization had secured the strategic as well as the operational initiative for Napoleon.<sup>7</sup> These conditions improved prospects for operational art to deliver rapid and total victory.<sup>8</sup>

The Prussian court and officer corps felt that Napoleon had contemptuously ignored Prussian dignity and interests. The march of French troops through Prussian territory in 1805, the French bullying following the victory at Austerlitz, the establishment of the Confederation of the Rhine from the ruins of the Holy Roman Empire without compensating Prussia and Napoleon's offer to return Hanover to Great Britain had amply demonstrated that Napoleon did not take Prussia seriously. Consequently, the Prussian

war aim, if there was any clear war aim at all, was the assertion of Prussian prestige as a major power.<sup>9</sup>

There was no common agreement, however, how this aim might be achieved. Hurt pride called for drastic military action, whereas fear of Napoleon's power advised a diplomatic solution. A coherent strategy was not formulated because the king was too hesitant to back either approach. Unlike Napoleon, Frederick William was not prompted by a domestic imperative to achieve a rapid and overwhelming victory. A negotiated peace, the combined outcome of military demonstrations and diplomacy, was sufficient for his purpose. Consequently, Prussia prepared for a war of moderate intensity rather than for the thunderbolt victory Napoleon was striving for. Berenhorst's and Scharnhorst's calls for single-minded and determined conduct of war were not heeded.

Since the quest for decisive battle did not dominate Prussian strategic planning, assembling all available troops in the field army was not considered necessary. Whereas Napoleon concentrated all first-line troops for rapid victory, 90,000 Prussian troops were dispersed in garrisons all over Prussia, Silesia and Hanover, 15,000 formed a strategic reserve under Württemberg and 25,000 remained in East Prussia. This left only 126,000 Prussian and Saxon troops, roughly half of the available forces, to play an active role in the campaign. Of these, no more than 115,000 men were present at Jena and Auerstädt on 14 October.<sup>10</sup> Whereas Napoleon's secondary armies, such as the Army of Holland, served several purposes, Prussian secondary deployments were wasteful and needlessly weakened the field army.

Prussian diplomacy showed the same lack of firmness and determination. Prussian foreign policy vacillated under the waxing and waning influences of the Francophile camp under foreign minister Haugwitz and a war party under Prince Louis Ferdinand. The alliance with Russia and Austria in 1805 and the mobilization in August 1806 had been successes of the war party. The occupation of Hanover, the alliance treaty with France and the continued responsiveness to French peace offers in autumn 1806 had been the work of Haugwitz and his supporters.<sup>11</sup> As a result of this uncertain course, Napoleon dominated the diplomatic game which permitted him to achieve conditions in which operational art could deliver total victory.

Napoleon's position as France's autocratic ruler at the head of a centralized state allowed him, like Frederick during the Silesian Wars, to combine diplomacy, strategy, social and economic policies and mobilization for the purpose of war. The administration of the *départements* provided conscripts, maintained the infrastructure and increased production for military as well as civil purposes. Military administration was shared between two ministries. The Ministry of War, under Berthier who doubled as chief of staff of the *Grande Armée*, was responsible for personnel, organization, training, movement, arms and ammunition, pay and pensions. The Ministry of the Administration of War's purview comprised rations, fuel, barracks, hospitals, uniforms, remounts, transport, forage and billeting. Both ministries were under the emperor's close supervision. This organization proved efficient and permitted the mobilization and upkeep of the French mass army. Unlike the Bourbon monarchy and revolutionary governments, neither court coteries nor rivalries in a collective government dissipated unity of purpose. Thus, policies could be dovetailed and combined to the best effect in shaping conditions favourable for operational art.<sup>12</sup>

Whereas Napoleon's strong and centralized control meshed all policies for the purpose of war, Frederick William failed in this respect. He was a weak ruler, dominated by advisers who were in the happy position of giving advice without having to accept responsibility. The king was neither willing to devolve authority to ministers nor was he capable of running the state on his own as Frederick had done. The ship of state sailed a vacillating course with a crew of helmsmen wrangling for the rudder while the captain was standing by with arms folded. The vacuum of leadership was consequently filled with contradictory policies. The results of this want of central direction and control were a lack of policy coordination, particularly between diplomacy and military planning, and a lacklustre mobilization. This state of affairs on the Prussian side played into the hands of Napoleon and increased prospects for operational art to deliver total victory.<sup>13</sup> Diplomats called for more time to come to a negotiated settlement with France, whereas generals wished to seize the initiative and launch a pre-emptive strike. Lacking a clear purpose, mobilization was slow, so that chances for a successful preventive attack were slipping away. This delay permitted Napoleon to continue his diplomatic games and rapidly mobilize only in the last possible moment, which permitted him to present himself as the victim of Prussian aggression and to seize the initiative at the same time.

A further consequence of Frederick William's irresolution had been the failure to reform the Prussian army in the years after the peace of Basle. Though the king had paid attention to calls for reform, he lacked the firmness to see the reforms through in the face of conservative opposition, which received intellectual support from Decken's writings.

Besides muddled policy and strategy as well as the failure to draw conclusions from the Wars of the French Revolution, a further consequence of the lack of central direction was an inefficient, wasteful and corrupt administration whose baleful effect on Prussian mobilization capability had already become apparent during the Polish insurrection in 1793–1794.<sup>14</sup>

Prussian mobilization was not alone in being far from complete. In 1806, France was no longer fighting for the defence of her own soil, nor for the defence of the Revolution. Consequently, a mobilization effort as in 1793 was unnecessary. Yet, the Revolution had established universal conscription and arms workshops as well as the centralized bureaucratic apparatus necessary to organize and execute the mobilization of manpower and material. Since the precedent of total mobilization had been set, Napoleon could mobilize as many troops as he needed for the successful execution of his strategy. Taking into account that he was dealing with a single enemy, and that a large part of military costs was carried by the Confederation as well as territories conquered in the course of the latest wars, neither a *levée en masse* nor painful economic measures were necessary. Instead, selective conscription according to the *Loi Jourdan* was applied and the economy remained free of excessive state intervention. Napoleon merely needed a sufficient number of troops to form a powerful field army organized into corps, and a considerable number of second-line troops for the protection of French coasts and borders as well as other secondary tasks. Though far from total, French manpower mobilization was impressive. Napoleon called up 50,000 conscripts and 30,000 reserves, followed by another 100,000 conscripts a few days later.<sup>15</sup>

Even though Napoleon's demands on the French nation were below those of the Committee of Public Safety, there was also less reason for the French public to accept the inconveniences of war, since Prussia did not pose a threat to French territory and security.

The conscription issue in particular continued to cause bad blood and turn large parts of the population against the state.<sup>16</sup> Though the French rejoiced over a series of military victories, they did not like to send their young men to fight and die on distant battlefields for causes which had become increasingly opaque. Total mobilization would have been hardly feasible under these conditions. Consequently, Napoleon had to limit the mobilization effort if he wished to avoid a serious decline in popularity. He also tried to use social and economic policies in a way that would generate public support for his rule in general, and acceptance for his foreign adventures in particular.

His domestic policies were designed to dispel discontent and turn society into a pillar of his power. The two tiers of his social policy were winning the approval of the masses and forging an *élite*, the new aristocracy, that owed its position to him and would provide him with crucial support in army, state and society. Napoleon also continued with protecting inefficient smallholdings in order to maintain his popularity.<sup>17</sup> For all his efforts in the field of social and economic policies, Napoleon did not achieve the degree of public support he had hoped for. Therefore, he had to rely on Fouché's secret police in order to suppress domestic opposition.<sup>18</sup> This failure to win firm and broad-based public support reinforced the imperative to win the war rapidly and at low cost by reliance on operational art.

If Napoleon was hampered by social and economic considerations from making full use of French resources, Prussia's problems were worse. Prussian mobilization of manpower was incomplete not only due to the unaggressive two-tier strategy of marching and negotiating but also due to agrarian Prussia's economic and financial weakness.

Though Frederick William, in his position as Prussia's legitimate ruler, did not need to take as much heed of public opinion as Napoleon, he felt compelled to reduce the strain on the economy. Reforms initiated by his minister Stein, which aimed at boosting Prussia's economic strength by creating a vibrant and productive middle class as a precondition for a Smithonian economy, had not yet come very far because their hesitant implementation had begun not earlier than 1804. Slow progress in civil reforms, which might have increased the potential for mobilization, was due to resistance by the Prussian nobility which did not welcome social and economic changes.<sup>19</sup> Therefore, Prussia's economic weakness persisted and had a deleterious influence on military effectiveness, including prospects for mobilizing a mass army.

Military reforms such as the establishment of a mass army, demanded by Berenhorst, Scharnhorst and Bülow, were discouraged by the poor state of finances and the insufficient capacity of arms manufactories. Financial constraints also had an impact on the army's age structure: officers and soldiers had to remain in service well beyond their military usefulness because the exchequer could not afford to pay pensions.<sup>20</sup> This petrified officer corps was hardly a match for the dynamic French officer corps which was so well suited for operational art and combined-arms tactics.

Furthermore, training time for cantonists had been reduced from eight to six weeks in order to limit the burden on labour-intensive agriculture.<sup>21</sup> Six weeks of annual training were barely sufficient to maintain the ability for performing standard linear tactics. They were insufficient for carrying out military experiments of the kind the French reformers had conducted after the Seven Years' War. Progress towards more flexible tactics could not be expected under these conditions.

Economic restraints not only reduced the effectiveness of tactical training, they also prevented the creation of large reserves. No attempt was made to mobilize the whole nation, following the French example, as Berenhorst, Scharnhorst, Knesebeck and Bülow had recommended. The Frederician model of military and social symbiosis which relegated the fighting role to the professional army and cantonists alone was no longer sufficient to counter French mobilization capabilities. Consequently, losses suffered by the Prussian army in the course of the coming campaign would be hard to replace because no coalition partner could provide the Prussian army with breathing space to recover from defeat. Only a handful of second-line reservists per company were available. Also, a lull in warfare during winter was unlikely as the Wars of the French Revolution had demonstrated. Whereas Napoleon could have created a second and a even a third *Grande Armée* within a short time, Prussia would have to rely on its dispersed garrisons and fortresses once its field army was destroyed.

Not only was the army not augmented, financial constraints also limited the mobilization of the regular army. About 33,000 troops, 15 per cent of army strength, were not mobilized before 30 September in the hope that they might not be needed after all.<sup>22</sup> Consequently, the army that took to the field, already weak due to the deployment of half the army's strength in garrisons and strategic reserves, became even weaker. Trains for artillery and transport were organized at the last possible moment. Some batteries joined the army only the day before the battle of Jena.

Napoleon's response to empty coffers was the energetic quest for decisive victory and a dictated peace. Frederick William's response to the same problem was the limitation of mobilization to the affordable limits. Napoleon had to win a total victory because he had staked everything on one card. This attitude was more conducive for operational art than Frederick William's.

Political considerations also reduced Prussian military effectiveness. The king did not wish to slight Brunswick, Rüchel or Hohenlohe by entrusting army command to one of them. Instead, he created three independent armies in the same theatre of war, with Brunswick only nominally in superior command. Since the resulting armies were fairly small, there was no need to organize the armies in corps.

Like the revolutionary governments, Napoleon harnessed human resources, talent and ambition for his purposes. Education policy served two ends. It was aimed at winning the allegiance of the middle classes by facilitating access to secondary education. And it provided him with functional *élites* to run his administration and to command his troops. The administrative *élite* ensured efficient mobilization for the maintenance of the mass army; the military *élite* provided officers capable of staff work as well as of leading mixed formations. Both functions were important for operational art.<sup>23</sup>

Officer selection and training made full use of merit and ability after the ideological ballast of the revolutionary period had been jettisoned. Though politically motivated appointments were not unknown to Napoleon—*aide-de-camps*, for instance, were often chosen for their social connections—he was loath to promote or select officers for their political credentials and social background rather than for military ability. With the threat of the *guillotine* replaced by the lure of immense rewards, ambition was rekindled as able officers were no longer afraid of promotion and responsibility. Many years of war in which meritorious officers had come forward and risen to high positions had separated the wheat from the chaff. The officer corps as a whole had also gained an unrivalled

wealth of experience. As a consequence, Napoleon's officer corps was more useful for the conduct of operational art as well as combined-arms tactics than its precursor of the revolutionary period.<sup>24</sup>

In the tradition of Carnot, science continued to be harnessed in the service of the state as well. The *École Polytechnique*, for instance, gave France a lead in several areas of science and technology. The Chappe telegraph was fully exploited. New lines had been built to permit Napoleon to lead his army as well as govern his empire from field headquarters.<sup>25</sup> In contrast to Napoleon's efforts, Prussian mobilization of human resources was as incomplete as her manpower mobilization. Access to the officer corps was as restricted as in Frederick's times with only a tenth of the corps not being noble. This restriction not only barred the military talents of large segments of the population, it also shielded aristocratic officers from having to compete with better-educated commoners. Berenhorst's and Scharnhorst's radical, and Decken's muted calls for the introduction of the meritocratic principle in officer selection were not heeded. Though Prussian officers remained as competent as ever in their regimental duties, the consequence of social selection was a want of the broad perception and dynamism which permeated the French officer corps and made it so suitable for the conduct of operational art and combined-arms tactics.<sup>26</sup>

In France, spiritual mobilization no longer played the same role as it had done in the early years of the Revolution. Since wars were fought far from French soil, the population had not to be kindled into active resistance. Fighting was left to those conscripts who could not afford a substitute and to those who chose the army as a career.<sup>27</sup> Nationalism may have been useful in integrating recruits and in strengthening unit cohesion, but the combat motivation of soldiers probably rested on prospects of promotion and rewards as well as on Napoleon's charisma, and the usual elements of morale such as *esprit de corps*. The meritocratic principle not only bolstered the motivation of ambitious soldiers, it may also have increased the confidence of the rank and file in their superiors, who could now, unlike under the old regime, be trusted to be equal to their task. When an officer had been accidentally promoted beyond the level of his military knowledge, Napoleon suspended the promotion until the officer had acquired the theoretical and practical knowledge required for his command.<sup>28</sup>

Rewards were a particularly powerful incentive. Under Napoleon's successful leadership, rewards could be immense. Membership in the *Legion d'Honneur* provided a pension as well as honour. Simple soldiers could rise to marshal's rank and become rulers of princedoms. A new nobility of the sword was created. Motivation based on self-interest had consequences for operations. Troops could be trusted to return when they went foraging or fell behind on forced marches. This reliability permitted Napoleon to forgo rear supply and to march rapidly, both important advantages in terms of operational speed and flexibility.<sup>29</sup> If French soldiers decided to desert nonetheless, conscription provided replacements.

Following the Frederician tradition rather than Berenhorst's and Scharnhorst's ideas, the Prussian government made no effort to rouse the population for participation in the coming struggle, apart from a proclamation by the king which justified the war and appealed to German nationalism and Prussian patriotism.<sup>30</sup> The much-quoted alienation between monarchy and army on the one hand, and the population on the other hand, should not be held responsible for omissions in spiritual mobilization since an outburst of

mob violence against the Francophile minister Haugwitz and pressure by public opinion to put the arrogant French into their place showed that the population was neither indifferent nor hostile towards the monarchy. The East Prussian estates even suggested raising a militia in support of the regular army.<sup>31</sup>

Those who believe that alienation between army and population was the root cause of the Prussian defeat should remember that the French army was not very popular in France either. Paris, for instance, was treated like an occupied city. Bullying, violence, robbery, murder and rape were committed by French troops in their own capital. The arrogance of officers towards civilians was far more pronounced in France than in Prussia.<sup>32</sup>

When Frederick William, however, failed to exploit this patriotic outrage, the flame of patriotism flickered and died, and initial public enthusiasm turned into contempt and resignation. The welcome given to the victorious Napoleon in Berlin by bureaucracy and public might have been due to the public's admiration for Napoleon the strongman, who contrasted so sharply with the feeble Prussian king, rather than due to a lack of patriotism.<sup>33</sup> In spite of Frederick William's failure to spark the patriotic spirit, the cooperation between army and civilians in the defence of Silesia demonstrated that Prussian subjects were as willing to cooperate with the army in defence of their property as French peasants had been in the 1790s.<sup>34</sup>

The morale of the Prussian army was based, as before, on the usual elements of positive motivation in professional armies. Though Frederick's charisma had gone with him, his reputation continued to inspire. Furthermore, increasingly humane treatment, the outlawing of press-ganging and the introduction of fixed-term service contracts had improved the soldier's lot.<sup>35</sup> Infantry regulations displayed the spirit of enlightened leadership. Recruits should be treated with patience in order to arouse their love of and interest in their profession. Punishment was to be reserved for the negligent or malicious, whereas good-willed but maladroit soldiers should receive special instruction. Good performance should be acknowledged and rewarded. The soldier's dignity should be respected. Dishonouring treatment such as punches in the face were forbidden. A relation of trust should grow between rankers and officers.<sup>36</sup>

The theme of dignity and military honour was also followed in other respects. Whereas the late Frederician army had contained convicted criminals, post-Frederician regulations considered the presence of thieves in the ranks as dishonouring to the regiment and prohibited the retention of such men.<sup>37</sup> Appeals to personal honour did not fail to have an impact. One commanding officer who permitted all his soldiers to leave the garrison without a pass, which was unheard of in Prussia, was vindicated by an end to desertions in his regiment.<sup>38</sup> Polish recruits were different. Their loyalty to the Prussian state, which they considered an occupation power, was preciously weak. They were so unenthusiastic that they had to be dragged into their barracks in chains. Polish cadets had no more love for the Prussian state. In the cadet academy in Kalisch, for instance, animosity between Prussian and Polish cadets ran so high that the numerically inferior Prussian cadets were thrashed by their Polish comrades on a regular basis.<sup>39</sup>

During the campaign, morale suffered because troops had not been prepared for the unpredictability of war, and because it became evident that Prussia's military leaders were outgeneraled. The eve of the battle of Jena, however, saw Prussian troops as eager for a fight as their forebears had been before Frederick's battles. When the Prussian field army was destroyed at Jena and Auerstädt, some Prussian troops showed the same

resilience Frederick's troops had demonstrated after the disaster of Kunersdorf. Fragments of the Prussian army conducted a fighting retreat under Blücher, Yorck and Weimar, and several professionals even went to considerable lengths to rejoin the army in East Prussia.<sup>40</sup> Blaming the alleged unreliability of Prussian mercenaries for defeat was clearly not justified. Marwitz, who raised a free corps in 1807, for instance, noted that the cantonists had all returned home, whereas former Prussian mercenaries flocked to his free corps and continued to serve loyally.<sup>41</sup>

Nonetheless, there were differences in morale between French and Prussian soldiers. Whereas French soldiers had, in theory at least, unlimited career prospects and could hope for rich rewards, Prussian soldiers had less incentives for demonstrating conspicuous individual bravery and reliability. This difference in morale had repercussions at the operational as well as the tactical levels. At the operational level, forced marches had to be avoided since stragglers might not rejoin. Prussian generals also did not trust their soldiers to return to the colours if they were sent foraging. Consequently, the shackles of rear supply had to be tolerated. At the tactical level, Prussian officers were hesitant to use line infantry in open-order tactics, which largely depended on personal initiative. Consequently, the Prussian army was at a disadvantage compared with the French. In this way, social and political factors which had an impact on morale and motivation made themselves felt in tactical as well as operational matters.

### **The operational level**

Napoleon had improved the operational instruments, the army corps and the staff system. The all-arms divisions, which had been the largest formations below army level in the early years of the Revolutionary Wars, were now permanently replaced by army corps consisting of infantry divisions with attached artillery, corps cavalry and corps artillery. In comparison with the all-arms divisions, corps were tactically far stronger, which permitted them to fight on their own for longer and against a stronger enemy until other corps came to their support. Consequently, they could be distributed over a larger frontage. The advantage of a larger frontage increased chances of deceiving and surprising the enemy because a larger number of objects were threatened and more avenues of approach were available.

A broader frontage also facilitated the outflanking of the enemy and the manoeuvre against his rear.<sup>42</sup> Consequently, manoeuvre for the purpose of battle became easier as chances had improved of driving the enemy into a corner, severing his line of retreat and attacking him from several sides. The strength of the corps also allowed one corps to fix the enemy in front while the other corps descended on his flank and rear. Though all-arms divisions could perform the same tasks in principle, it was more risky due to their relative weakness. The battle of Jena demonstrated that a corps was sufficiently strong to fight an army until other corps could come up in support. Napoleon began the battle early on 14 October with only Lannes's and Augereau's corps present. Ney's and Soult's corps arrived in the course of the day. The battle of Auerstädt proved that a corps might even fight and win a battle all on its own.

The corps commanders were skilled and experienced executioners of Napoleon's orders. Though Napoleon was reluctant to share all his plans and intelligence with them,



he gave them more information than was absolutely necessary for them to perform their tasks. Lannes and Soult, who had to act with some degree of latitude and independence due to the exposed position of their corps, received more detailed orders along with an outline of the overall military situation and Napoleon's intentions.<sup>43</sup> The reason for Napoleon's secrecy towards most of his marshals may have been part of his habit of concealing his intentions, but it may also have been the case that Napoleon did not wish to give his marshals an insight into his operational art and other *arcana imperii* which would have enabled them to imitate his generalship and to replace him.<sup>44</sup>

For all the skill of the marshals, the corps system was not always used to maximum effect. Though the corps were encouraged to communicate with and support each other, which they usually did, inter-corps cooperation sometimes failed. When Lannes encountered Prince Louis Ferdinand's command at Saalfeld, he was on his own because he had failed to ensure cooperation with Augereau, whose corps was a day's march behind. After this incident, correspondence and cooperation between Lannes and Augereau became exemplary. More serious was Bernadotte's failure to come to Davout's support when the III Corps faced the might of Brunswick's army on 14 October. This uncooperative behaviour could easily have resulted in the destruction of Davout's corps. On balance, however, much better use was made of operational instruments than ever before.<sup>45</sup>

The Prussian army could not boast operational instruments comparable to French army corps. All-arms divisions had only been improvised with the outset of the campaign. Rüchel's divisions were even less organized. By 11 October, some battalions still did not know which brigade they belonged to.<sup>46</sup> Each division consisted of 8–10 infantry battalions in two brigades, 10–15 squadrons including a battery of horse artillery in a cavalry brigade, 5–10 squadrons of hussars and one fusilier battalion or a *Jäger* company.<sup>47</sup>

The divisions' intended purpose is unclear. Scharnhorst, on whose instigation the divisional organization had been introduced, had studied Prince Henry's use of all-arms divisions at Freiberg during the Seven Years' War but had failed to fully understand their operational potential. In his analyses of the French revolutionary army he had also discussed divisions merely in the context of tactics. Since Scharnhorst's writings do not display any awareness of the operational level, this interpretation becomes even more likely. The way in which Prussian armies and their divisions operated showed just as little understanding of the operational use of divisional organization. Bülow's insights into the emergence of the operational level and the operational advantages of advancing on a broad front had not received sufficient attention to influence the operational use of Prussian divisions. The strength of all-arms divisions, namely the ability to safely advance on parallel roads, had not been understood. Prussian divisions usually marched in one long column along one road. If the march towards the Kösen defile on 12–13 October had taken advantage of the divisions' ability to march separately and fight concentratedly, Brunswick's army might have avoided the disaster of Auerstädt.

Inexperience in their employment rendered Prussian divisions worse than useless. They not only shared the weaknesses of the French revolutionary divisions, they added some of their own. The fact that divisions were improvised meant that Prussian generals did not know how to use them, and divisional commanders did not know how to lead them. Since the divisional staff was only as improvised as the division, the commander

could not expect expert assistance from this quarter either. Inexperience with using divisions induced army commanders to ignore the divisional organization and give orders directly to individual battalions and squadrons. Though the Prussian chain of command was roughly comparable to the French with 14 Prussian divisions in 3 armies compared to 20 French divisions in 6 army corps and a cavalry reserve, French experience and routine in the use of modern army organization ensured higher speed of control and reaction.

With the growing size of French army corps and their distribution over a larger area, the staff system had to be improved as well in order to ensure efficient cooperation and rapid reactions at all times. The general staff (*État-Major*) was responsible for the central administration of the army as well as the coordination of the corps. The *Grand Quartier-Général Impérial* comprised the *Maison*, the *Grand État-Major Général*, and the *Intendance*. The *Maison*, headed by Duroc and Caulaincourt, consisted of the *Cabinet* and the Topographical Bureau. The *Cabinet* was divided into the Secretariat, which provided secretaries and archivists, and the *Bureau de Renseignements*, which gathered strategic intelligence on foreign powers, their capabilities and intentions, from spy reports and open sources alike. The Topographical Bureau held the situations map, which was permanently updated, theatre maps, fortress plans and notes on local resources. Secretary of State Maret, the civilian counterpart to Berthier, was with the *Maison* to deal with all non-military affairs of the Empire.

The General Staff was divided into two parts. The *État-major Particular* was the chief executive circle, divided into divisions for troop movements, intelligence, reconnaissance, personnel and copying and distribution of orders. This was also the place for interpreters and allied *liaison* officers. The proper general staff, the *État-Major Général* had three divisions. The first dealt with troop movements, orders of the day, officer assignments and general correspondence. The second with supply, headquarters administration, police and hospitals. The third with prisoners, deserters, recruitment and military justice. In 1806, a fourth division was responsible for the lines of communications. The *Intendance* under Daru had to administer the rear areas in matters such as contributions, requisitions, magazines, prisoners, wounded men and arms production. In addition to *Maison*, *État-Major* and *Intendance*, there were minor staffs for artillery, engineers, cavalry reserve, the provost marshal general, postal services and other services. Since the Imperial Headquarters were huge and cumbersome, Napoleon and Berthier often raced ahead with the highly mobile *Petite Quartier-Général*. The French general staff in the broader sense was probably the most sophisticated and professional organization of its day.<sup>48</sup>

The corps staffs regularly communicated with the general staff, sent reconnaissance reports as well as status reports, coordinated the movements of the divisions in accordance with the general staff's orders and communicated with the staffs of adjacent corps. Divisional staffs reported to the corps staff and coordinated the movements of their brigades. Napoleon was fully aware of the importance of subordinate staffs and ensured that his divisional and corps staffs had their full complement of personnel.<sup>49</sup>

Staff routines were streamlined in order to achieve maximum efficiency. When corps commanders received reports from their patrols, the corps staffs sent the reports to the chief of the general staff. Berthier then forwarded the report with a short summary on top to the Topographical Bureau, where the new enemy positions were pinpointed on the

situation map, and to Napoleon. The emperor went to bed between 7 and 8 pm, rose at midnight, read the latest reports and dictated orders to Berthier. Berthier then wrote a draft order and presented it to Napoleon. Once the draft was approved, it was sent to the division of the general staff responsible for issuing orders. Berthier also changed orders for reinforcements, supplies and rear services to comply with the latest marching orders for the corps. These minor administrative changes were forwarded to the *Intendance* where Daru had to see to their execution. Marching orders for the corps were ready in the early hours. Officers from the corps staffs who had carried the latest status and reconnaissance reports to general headquarters in the evening returned to their corps in the early hours of the next morning with the new set of orders. Consequently, corps could execute the new orders by dawn.<sup>50</sup>

French work staff did not waste any time. Troops did not have to wait for their orders, commanders did not have to wait for reports. The high speed of decision-making, dissemination of orders and execution ensured that the French army achieved more than the enemy in the same time, which, in turn, ensured that the initiative remained in Napoleon's hands. The *Grande Armée* moved first and it moved faster in every respect. This capability made the staff system the necessary complement of the corps system in the application of operational art. Not only was the organization of the French staff system sophisticated, the work of the staffs was very efficient and well organized. Shortcomings in the work of the staffs would have blunted the edge of the corps system. The speed and efficiency in drafting and disseminating orders and processing reports partly accounts for the *Grande Armée's* superiority in flexibility and reaction time which significantly contributed to the success of operational art. During the night of 11–12 October, for instance, orders were sent to corps as far as 32 km from general headquarters and were being executed within 5 hours. The III Corps, 8 km from general headquarters, received the marching order at 6 am and was on the move by 7 am.<sup>51</sup>

Mistakes, due to oversight or contradictory orders, were occasionally made. During the march to the assembly areas in early October, III Corps was delayed because it had to share a road with I Corps due to Berthier's failure to keep marching tables up to date. On 12 October, Murat received contradictory orders: Napoleon ordered him to flood the plain of Leipzig with cavalry, whereas Berthier ordered him to send a mere handful of scouts towards Leipzig and Naumburg. Augereau had not received marching orders for 10 October with the result that Lannes had to fight the battle of Saalfeld unsupported. Soult was also a day behind marching schedule when Imperial Headquarters failed to send him new marching orders.<sup>52</sup> Due to the flexibility of Napoleon's operational art, the responsiveness of the staff system and the speed of the army corps, however, minor mistakes could quickly be rectified.

Whereas commanders of unitary armies, such as Frederick, could see much for themselves, the spatial distribution of corps as well as the size of the army forced Napoleon to rely on his staffs to provide him with all the necessary information. Every evening, he received a detailed report (*état de situation*) on strength, combat encounters, casualties, sickness, supplies, marches, cantonments and enemy positions from the corps. Every 5 days, the corps submitted a more detailed *état de situation sommaire*, every 15 days an even more detailed *grand état de situation*. Commissaries presented a report on stocks and supplies every 10 days. It is indicative of Berthier's spirit of efficiency that all reports were written on standardized forms.<sup>53</sup>

In addition to regular reports, Napoleon wished to gain a direct insight into the situation and to keep close to the scene of action. To this purpose, he and his mobile headquarters travelled well forward. The mobility of his forward headquarters surpassed the mobility of his corps. He travelled in his command coach up to 90km a day. The coach was stuffed with reports, maps, reference works, status reports and facilities to eat, work and sleep on the move. This often permitted him to give orders on the spot rather than from headquarters far behind or even the capital. Even in mid-campaign, signals arrangements combining telegraphs and couriers permitted him to run his whole empire from field headquarters.<sup>54</sup> When the campaign entered a more intensive phase and time became even more critical, Napoleon demanded reports directly from the corps and gave instructions directly to the marshals rather than relaying all correspondence via Berthier, though Berthier remained fully informed.<sup>55</sup>

The application of the meritocratic principle rather than social or ideological prejudice provided the French staff system with competent officers. French staff officers were selected for their experience as well as their intellectual capabilities. Chiefs of the corps staffs were chosen from the generals. Junior staff officers were picked from infantry, cavalry, artillery and engineers. Some of them rejoined their units after some time. Though there was no formal system of staff officer training, the standard of professionalism must have been very high if Thiébault's manual for staff officers is any guide. The frequent interchange between troop command and staff duty was advantageous for the staffs as well as the troops. The system ensured that officers reporting for staff duty already had a wealth of practical war experience, and it provided the troops with a sprinkling of former staff-officers, which must have reduced frictions between staff and line officer corps as well as raising the professional standard of the line officer corps.

By and large, Napoleon's staff system corresponded to Guibert's and Bourcet's ideas. Berthier's role as chief of staff, however, fell far short of Bourcet's demands.<sup>56</sup> Whereas Bourcet wanted the chief of staff to be an independent planner and adviser rather than merely an executioner, administrator and coordinator, Napoleon curtailed Berthier's role and did much of the work himself which Bourcet would have assigned to the chief of staff, such as reading reports, calculating marching times and distances and supervising supply arrangements.<sup>57</sup> Taking into account Berthier's usual workload, however, it is questionable whether he would have been able to fulfil the role of an adviser in addition to his routine duties. In spite of such minor shortcomings, the quality of the operational instruments, the corps system and the staff system, provided the *Grande Armée* with superior responsiveness, speed and manoeuvrability.

Compared with the French general staff, its Prussian counterpart was of a very different kind. The staff was organized in three regional departments. Scharnhorst was responsible for the western theatre (Westphalia and France), Colonel Massenbach for the southern theatre (Prussia and Austria) and Colonel Pfull for the eastern theatre (Silesia and Poland/Russia). In peacetime, the work of the departments consisted in drafting contingency plans, conducting staff rides to identify tactically strong positions, training staff officers and studying the history of the campaigns conducted in the particular theatre.<sup>58</sup> Quartermaster-General Geusau, the chief of the general staff, was an old man too occupied with his additional responsibilities as the inspector of the engineer corps and fortresses to provide the effective central authority necessary for coordinating the work of

the staff. Consequently, cooperation among the departments was left to their chiefs, which proved to be difficult since Scharnhorst and Massenbach were not on speaking terms. Furthermore, each department had its own routines and understanding of the art of war. Junior staff officers were trained according to this departmental philosophy, thereby cementing divisions in the staff. Scharnhorst considered the lessons of military history of utmost importance. Pfull built his campaign plans on supply calculations. Massenbach regarded the tactical value of strong positions as the key consideration.

With the onset of the campaign, the general staff was distributed over the three armies. Massenbach was assigned to Hohenlohe, Pfull to Rüchel and Scharnhorst to Brunswick. Scharnhorst and his staff not only had to direct Brunswick's army, Scharnhorst also doubled as chief of staff of the composite army. Naturally, the chiefs of staff tried to impress their understanding of the art of war on their hapless commanders. Whereas Scharnhorst and Brunswick, who had not got along with each other from the start, finally fell out on 11–12 October, Hohenlohe was under the spell of the eloquent but muddle-headed Massenbach.<sup>59</sup> This state of affairs in which Scharnhorst, the acting chief of staff, was sidelined, whereas Massenbach enjoyed the backing of Hohenlohe, effectively pitted Massenbach and Scharnhorst as rivals. Prolonged clashes of opinion were to be expected under these circumstances.

Apart from different approaches to the art of war, Scharnhorst and Massenbach differed in the understanding of the staff officer's role. Scharnhorst envisaged staff officers to be advisers rather than mere executioners of the commander's orders. Consequently, he paid much attention to the training of competent staff officers. Since 1801 he had worked on the improvement of military education. In 1804, he turned the School for Junior Infantry and Cavalry Officers (*Lehranstalt für jüngere Infanterie- und Kavallerieoffiziere*) into a war academy. The course lasted three years and included logic, mathematics, artillery science, fortification, tactics, strategy, geography, military history and recent military developments. Scharnhorst also gave introductory classes on staff work. He ensured that the training was realistic, practical and demanding. The principle of the academy was to enable the officer to think independently rather than to cram his mind with scientific facts. This promising reform of officer training came too late. Instead of the Scharnhorst-type staff officer, the Prussian general staff was dominated by staff officers who corresponded to the ideas of Massenbach, who had reorganized the general staff in 1803.<sup>60</sup>

Whereas French staff officers were practical men with considerable experience, and Scharnhorst's ideal staff officer was comprehensively trained and educated, Massenbach's general staff officer was an esoteric disciple of the higher reaches of the art of war. Massenbach himself was the best example of this type, who felt comfortable in the ivory tower of military theory but knew little about practice. He loved to draft fanciful campaign plans but was neither capable nor willing to write marching tables or to stake out a bivouac site. He considered important everyday tasks such as planning a march too mundane to warrant his attention.<sup>61</sup>

Though Scharnhorst's staff was better prepared, it was not at its best in practical tasks such as march planning either, as the bungled march to Auerstädt showed. Possibly, Scharnhorst's small staff was simply overworked. Whereas Napoleon ensured that all layers of the staff system were well manned, Prussian staff officers were burdened with work below their qualifications because the miserly exchequer did not pay for sufficient

secretaries, *aide-de-camps* and *guides*. Again, Prussian finances reduced military effectiveness, in this instance by hampering Prussian operations by an inefficient staff system.

Whether due to lack of ancillary personnel or due to inappropriately trained officers, Prussian staff work was slow and disorganized throughout the campaign. When Prussian columns were set in motion to take up their positions at the outset of the campaign, many regiments had not received any orders at all. Other units were sent hither and thither by order and counter-order. On 7 October, troops wasted a day marching in accordance with the old set of orders because the staffs had not been quick enough in issuing the new set of orders. On 10 October, Massenbach's staff had assigned the same road from Roda to Jena to supply trains and troops with the inevitable result of disorder and intermingling.

On the same day, Prince Louis Ferdinand fought and lost the battle at Saalfeld in the belief that he had to cover the right flank of Hohenlohe's army, which was to cross the Saale further north. Massenbach had failed to inform the unfortunate prince of the cancellation of the intended crossing. On 12 October, much time was wasted in staking out the camp for Hohenlohe's army for a second time because Massenbach had done such a poor job the evening before. Scharnhorst's and Massenbach's staffs had also failed to use the night of 12 October to supply the troops, distribute ammunition and reorganize units which had become disordered. Massenbach added yet another blunder to his impressive record by failing to order one of the divisional commanders, General Grawert, whose division was in an exposed position, to rejoin Hohenlohe's main force in accordance with the latest decisions.

Scharnhorst's bungled planning for the march to the Kösen defile on 13–14 October had dire consequences. Instead of marching with part of Brunswick's divisions on the Weimar-Auerstädt, with the other part on the Umpferstädt-Eckartsberg road, the whole army marched along one road. If both roads had been used, Brunswick's army might have reached the Kösen defile before Davout arrived in force. At least, the army would have arrived before Hassenhausen from two directions on 14 October. This would have permitted a considerably faster deployment of the Prussian divisions, which would have prevented Davout from beating the army piecemeal.

During the night of 13–14 October, Brunswick's army settled down in an improvised bivouac because the staff had failed to prepare a camp. The ensuing chaos prevented the distribution of food and forage. Furthermore, in consequence of the chaotic bivouac, Brunswick's army was disorganized when it marched off early the next morning. There was no time to reorganize it because Brunswick had become aware that he had to hurry his army forward if he wanted to reach the Kösen defile before the French. Consequently, divisions and brigades were mixed, marching columns crossed and intermingled and some brigades were left without orders. The net result was that Brunswick's army arrived late and bit by bit on the battlefield of Auerstädt. The march via Kösen on Freiburg was an unnecessary risk anyway since there was a major road from Eckartsberg to Freiburg which bypassed Kösen and Naumburg, where the French were known to be.

After the defeats of Jena and Auerstädt, the staff's capability to control the army, which had never been good in the best of times, broke down completely. Troops intermingled and staffs dispersed. Junior officers had to decide where to turn with the handful of men still under their immediate control since no staff officer gave them orders, nor had any contingency plans for the retreat been prepared. This breakdown of

command and control had one advantage: it prevented further staff blunders.<sup>62</sup> With only slight exaggeration it may be said that the French general staff was an instrument for victory, whereas the Prussian general staff was an instrument for defeat.

A further problem with Prussian command and control was the inefficient process of decision-making. Councils of war assembled in the morning and agreed on a common plan in the course of the day. These deliberations could even take several days. Rather than having *aide-de-camps* carry orders, army commanders received their orders personally in general headquarters and then leisurely rode back to their army with the new plan in their pocket. When they arrived in their own headquarters, they turned the plan into detailed orders for every single battalion and squadron rather than taking advantage of the divisional organization which would have permitted them to send a short and simple order to each divisional staff, leaving the task of briefing the division's subunits to them. Furthermore, the task of formulating orders should have been performed by the chief of staff.

Such delays were dangerous. On 13 October at 11 am, for instance, Rüchel had received orders to close up to the main army. His army could begin the march only after his return from royal headquarters in the afternoon. Consequently, it was still far from the battlefield when Hohenlohe needed its support on 14 October. Other armies were equally sluggish. Though the decision to retreat with all Prussian armies on Freiburg had already been taken on 12 October, the march began only on 13 October. If Brunswick's army had begun the march on 12 October, his command would have reached the Kösen defile after a march of 30 km in the course of 13 October, and the battle of Auerstädt might have become a minor rearguard action.<sup>63</sup>

Whereas French staffs and army corps reacted in a matter of hours, the Prussians wasted whole days with inefficient command and control procedures. With the Prussian army moving at that speed, it is not surprising that Napoleon held the initiative and could make full use of his operational instruments to outmanoeuvre his cumbersome adversary. In matters of command and control, the asymmetry between French operational instruments and operational art on the one hand, and quasi-Frederician army organization and attitudes on the other hand became glaringly apparent.

Napoleon's operations plans also reflected a different understanding of the conduct of war. His plan of September 1806 corresponded to his strategy of winning a rapid and total victory. To achieve this purpose, he intended to make maximum use of his operational instruments in order to destroy the Prussian army in battle. Though military threats to the empire were numerous, including insurrections, British amphibious landings, Russian attacks in Dalmatia and the resurgence of the Austrian army, 180,000 first-line troops were concentrated in the *Grande Armée*, ready for the invasion of Prussia.<sup>64</sup>

In order to achieve the concentration of first-line troops for the main purpose, the principle of economy of force, which had often been ignored during the Wars of the Revolution, was adhered to. Secondary tasks such as guarding the frontiers and coasts of France and covering the lines of communications were left to second-line forces such as the National Guard and recently levied conscripts. Napoleon husbanded even his second-line forces. Brest did not receive any kind of garrison because Napoleon believed that sailors and shipyard workers could defend the harbour on their own. Fortresses along the

coast were strengthened, probably in order to reduce the size of the garrison necessary to defend them.<sup>65</sup>

Furthermore, many of the troops committed to secondary tasks fulfilled more than one function. The Army of Holland was not only ready to repel a British landing, it also created a diversion at Prussia's western border which confused the Prussians. The Bavarian corps in south-east Germany not only protected the communications of the *Grande Armée*, it also guarded against Austrian intervention. If the Austrians did not intervene, the Bavarians could reinforce the *Grande Armée*. The VIII Corps in Mainz also fulfilled several functions. It guarded communications, created a diversion, intimidated Hesse-Cassel and it served, combined with the Army of Holland, as a strategic reserve in case the *Grande Armée* was beaten and forced to retreat. Thus, even though numerous troops could not directly contribute to the campaign, they were employed in the most efficient way and rendered at least indirect assistance. Napoleon cannot be blamed for not having integrated these troops into the field army because increasing the size of the *Grande Armée* beyond 180,000 men would have caused delays and created problems related to supply and transport.

Once Napoleon had decided to attack Prussia, he had to choose among the possible invasion routes. He could invade the Prussian Rhine province and Hanover from the lower Rhine. An invasion along this axis would have had to overcome one river line after the next and would merely have pushed the Prussian army eastwards. Alternatively, the army could advance from Frankfurt through Hesse-Cassel, then through the Thuringian Forest on Eisenach, and further on Magdeburg and Leipzig. There was, however, only one road from Frankfurt to Eisenach via Fulda and Vach, another one from Schweinfurt via Meiningen to Gotha and a third one from Bamberg via Coburg and Hildburghausen on Erfurt. If the corps advanced on these roads, they would move beyond supporting distance. Furthermore, an advance along this axis would, like the invasion from the west, merely push the Prussians eastward. The third alternative, which Napoleon finally chose, was to take the shortest way to Berlin by an advance across the Franconian Forest. This route was not only the shortest way to Berlin, it also offered the prospect of interposing the *Grande Armée* between the Prussian army and Berlin, as well as the Saxon capital and possible Russian reinforcements. The most important advantage offered by this route was the prospect of annihilating the Prussian army with one blow by cutting off its line of retreat. Furthermore, advancing close to the Bohemian border gave Napoleon the additional advantage of cowing the Austrians in case they toyed with the idea of joining the Prussian camp.

Since Napoleon did not know Prussian deployment plans, he had to keep his dispositions flexible enough to deal with contingencies. Therefore, he decided to advance from the Bamberg-Coburg-Kronach-Bayreuth area on the Coburg-Gräfenthal-Saalfeld, the Kronach-Nordhalben-Saalfeld and the Bayreuth-Münchberg-Hof roads. The formation chosen was the *bataillon carrée*, consisting of three columns with two corps each. The centre column, in addition, contained most of the cavalry reserve. The frontage of at most 50 km permitted the columns to support each other. Though lateral communications were limited in the mountains of the Franconian Forest, no corps was separated from the others by a significant river or mountain chain.

In this formation, Napoleon could deal with any conceivable Prussian move. If the Prussian army advanced south-west in an attempt to cut off his communications in the



Main valley, he would turn west and fall into their left flank. If they marched south-east towards Bohemia to join the Austrians, he would turn east, fall into their right flank and drive them into the Bohemian mountains. If the Prussians were waiting for the invasion on the northern side of the Franconian Forest, then his columns would be close enough to support each other. If the enemy prevented one of his columns from debouching from the passes, the other two columns would swing round into the enemy's rear. If one of the flank columns were attacked, it could fall back on the centre column. Instead of keeping his corps concentrated at all times, which would have slowed his advance, he distributed them in a way which permitted him to march separately but to fight with concentrated forces.

Furthermore, the advance in parallel columns through the mountains offered the advantages of deception, surprise and flexibility outlined by Bourcet. Once the *Grande Armée* had crossed the Franconian Forest, it would head for Berlin either to sever the Prussian army's line of retreat or to force it to give battle at the threshold of the capital. Napoleon's plan exploited the operational advantages of the corps system to the utmost.<sup>66</sup>

The chances to destroy the Prussian army in one blow were good. Not only had the operational instruments been improved, strategic conditions were also propitious. This time, Prussia would have to fight in or close to her own country. Only parts of Prussia, such as mountainous Silesia, could rely on fortresses for some protection. Most of the country was open and accessible. Consequently, the Prussian army had to accept the risk of major battle if it did not wish to surrender the country to the invader. Furthermore, the bulk of the Prussian army was likely to be committed since Prussia was defending her own territory and France posed the only threat. The commitment of most of the Prussian army in stemming the French invasion offered a chance of inflicting crippling damage on Prussian military power in a single battle. Neither Frederick nor the French generals of the revolutionary period had enjoyed this advantage. If the Prussian army could be destroyed within the first few weeks of the campaign, the war would be as good as over because no allied army would be at hand to provide the Prussians with a breathing space to recuperate.

In order to fight the war on or close to Prussian territory, Napoleon had to prevent the Prussians from seizing the initiative and turning the Confederation of the Rhine territories into the theatre of war. In order to achieve this aim, Napoleon used diplomacy as well as the adroit deployment of troops. By nourishing Prussian hopes that a negotiated peace might still be at hand, he prevented the enemy from opening hostilities. By deploying the Army of Holland on the lower Rhine and the VIII Corps at Frankfurt, he confused the Prussians as to his intentions. This combination of diplomatic and military deception paralyzed the enemy and ensured that Napoleon would have the initiative. It also ensured that the direction of the French advance would surprise the adversary.

Due to his omnipotence, Napoleon could combine diplomatic and military activities in accordance with the same principles. The dominating principle was the unity of command at all levels of war. Other principles were applied to several levels as well. At the strategic level, he deceived the enemy by feinting peaceful intentions and by creating diversionary forces such as the Army of Holland. At the operational level, he deceived by advancing in three columns, thus masking the objective of his advance. Deception enabled Napoleon to surprise the enemy and to seize the initiative, which, in turn, permitted him to outmanoeuvre and corner the enemy for battle.

He also applied the principle of concentration of superior forces at several levels. At the strategic level, Napoleon weakened the enemy by depriving him of allies and their troops, while he mobilized and deployed superior forces for the campaign. At the operational level, he rapidly concentrated his troops for battle, thus massing superior numbers which promised better prospects for decisive results. At the tactical level, he concentrated firepower in the grand battery.

The principle of speed was also applied at more than one level. At the strategic level, mobilization and deployment were rapidly carried out. At the operational level, the corps advanced fast, outmanoeuvring the enemy. At the tactical level, corps organization and flexible tactics permitted swift movement on the battle-field.

Likewise, the principle of mutual support permeated all levels. At the strategic level, the Army of Holland, VIII Corps, the Bavarian army and the *Grande Armée* seconded each other. At the operational level, the corps of the three columns rendered mutual cover, permitting the high degree of flexibility necessary to outmanoeuvre the enemy. At the tactical level, the three arms supported each other in order to achieve the destruction of the enemy army.<sup>67</sup>

The plan also took into account Bourcet's demand for flexibility and anticipation of contingencies. The flexibility of the *bataillon carrée* was put to the test when Napoleon falsely assumed the enemy's presence at Gera on 10 October: he was able to change the direction of his corps in an instant. The VI Corps advanced via Plauen on Gera, the IV Corps joined the centre column at Schleiz and the I and III Corps and part of the cavalry reserve marched north-eastward on Gera. If the Prussians had indeed made a stand at Gera to block Napoleon's advance on Leipzig and Berlin as he had assumed, he would have had three corps (I, III, IV) and the cavalry reserve at hand to fix the enemy, with two more corps (V, VI) joining the next day.<sup>68</sup>

On 11–12 October, Napoleon's dispositions demonstrated their flexibility once more. He realized that the enemy was not at Gera, and now assumed the Prussian army was at Erfurt. Again, he swung the *Grande Armée* around. The I and in Corps, which had so far formed the centre column, swapped their relative positions with the IV and VI Corps. The left column of V and VII Corps continued its advance northwards, the new right column of I and III Corps marched north-westward on Naumburg and the new centre column of IV and VI Corps advanced west. If the Prussians had given battle at Erfurt on 16 October, as Napoleon had expected, his dispositions would have ensured the presence of four corps (IV, V, VI, VII) and part of the cavalry reserve approaching Erfurt from the east, and two more corps (I and III) and part of the cavalry reserve approaching Erfurt from the north-east, cutting the Prussian line of retreat to Magdeburg and Berlin.<sup>69</sup>

On 13 October, when Napoleon had come to the mistaken conclusion that the whole Prussian army was close to Jena on the west bank of the Saale, he changed his plans once more. He ordered the IV, V, VI and VII Corps and the cavalry reserve to advance directly on Jena, whereas the I and III Corps were to move on Apolda in order to sever the Prussian line of retreat and to arrive on the battlefield in the enemy's rear.<sup>70</sup>

During the whole campaign from the beginning to the battles of Jena and Auerstädt, dispositions were flexible enough to fight and beat the enemy wherever and whenever he appeared. At least two corps were always able to support each other, with the balance of the army approaching from other directions to threaten the enemy's flank or rear. This degree of flexibility was also demonstrated at Auerstädt. Though Napoleon had not

expected Davout to encounter the bulk of the Prussian army at Auerstädt, the flexibility of the plan would have permitted Davout to fix Brunswick in front while Bernadotte could have attacked his right. In the event, this did not happen only because Bernadotte declined cooperation.

Napoleon's plans demonstrated the closeness between operational and tactical manoeuvres. The concentric advance on Erfurt was envisaged to cut off, encircle and annihilate the Prussian army. The operational manoeuvre of Davout's and Bernadotte's corps enveloping the Prussian left would have turned into a tactical manoeuvre with the two corps descending on or behind the Prussian left on the battlefield. Manoeuvre off the battlefield would have been imperceptibly transformed into manoeuvre on the battlefield.

Whereas Napoleon conceived only four operational plans, three of which were merely modifications of the original, the Prussians produced one after another, often several at once. The root cause of this planning frenzy was a lack of unity of command. Though Brunswick was nominally overall commander of all three armies in the theatre, unity of command was not ensured since the king did not entirely relinquish his command to Brunswick. Instead, he intervened from time to time, to the point of giving direct orders to subordinate commanders.

Here, the weakness of Frederick William's rule became obvious once more. He did not have sufficient confidence to take control himself, but he was also unwilling to completely surrender control to somebody else. Thus, Frederick William's personality had a direct impact on Prussian military effectiveness. Brunswick, for his part, hardly made an attempt to assert his authority.<sup>71</sup> Instead, he called councils of war with a frequency which not even Santa Cruz would have approved. These councils proved a fertile ground for plans but not for decisions. Rather than granting Scharnhorst's staff a monopoly on plans, which it should have had, considering that it was the staff of the composite army, Massenbach submitted plans at such a rate as if he wished to swamp his rival.

The councils could last for days and produce only a weak compromise in the end.<sup>72</sup> This compromise plan would hardly be carried out because conditions had changed meanwhile so that a new council had to be called to produce a new plan. A further consequence of Brunswick's lack of assertiveness was Hohenlohe's insubordination. Because Hohenlohe, belonging to the war faction, was impatient with Brunswick's hesitancy, he tried to impose his more aggressive approach.<sup>73</sup> On 9 October, Hohenlohe ordered his Saxon troops to remain in an exposed position at Mittel-Pöllnitz, in contradiction to Brunswick's orders, instead of moving them closer to the Saale and Brunswick's army because he wished to follow his pet scheme of meeting the French head-on on the right bank of the Saale. Hohenlohe even went so far as to encourage other commanders to insubordination. Brunswick, true to his weak spirit, did not insist on obedience to his orders, an omission which legitimized the affront.<sup>74</sup> These insubordinations by Hohenlohe played into Napoleon's hands by delaying the assembly of the three Prussian armies in the Weimar-Jena area. As in the case of the French army in the Seven Years' War, personal tensions left their mark on the conduct of the campaign.

Unity of command and a proper staff organization with clear-cut fields of responsibilities would have increased chances for the Prussian army to perform

creditably. Instead, weaknesses of Prussia's political structure were mirrored in military command and control.

Apart from the lack of unity of command, another cause for the multitude of ideas in campaign planning was the lack of a clear strategic objective. It was not evident whether the army should seize the initiative and commence hostilities, whether it should wait for Saxon and Hessian reinforcements before attacking or whether it should remain on the defensive and hope for a negotiated peace. Brunswick, in particular, did not abandon hope that recourse to arms might still be avoided.<sup>75</sup>

The quality of Prussian operations plans was not comparable to Napoleon's. Though some of the plans produced before and during the campaign contained correct observations on Napoleon's art of war, other plans demonstrated a lack of deeper understanding and some, such as Massenbach's idea to break the army into two widely separated parts, were dangerous nonsense. A comprehensive understanding of Napoleon's operational art was clearly missing. The last plan before the fateful 14 October was for Brunswick to retreat to Magdeburg, covered by Richel and Hohenlohe, who would follow later on. Due to the slow decision-making and implementation process, this plan came too late to extract the Prussian army from encirclement.<sup>76</sup>

In contrast to Prussian plans, Napoleon's were built on the principles of unity of command, deception, surprise, initiative, economy of force, cooperation, flexibility, speed, concentration, exploitation and destruction. He deceived the enemy in order to surprise him and to seize the initiative. Speed and flexibility allowed him to surprise the enemy and outmanoeuvre him. Speed and flexibility also permitted Napoleon to maintain the initiative. Economy of force, speed of movement and cooperation ensured that he would have superior numbers concentrated on the battlefield. Flexibility and mutual cooperation guaranteed the security of the corps in all events and provided for cornering the enemy and preparing his destruction. Destruction would be completed by the prompt and thorough exploitation of victory by relentless pursuit. Unity of command ensured centralized coordination and rapid decision-making, which was important for operational speed and maintaining the initiative. By combining surprise, initiative, speed and the exploitation of victory, Napoleon threw the enemy off his mental as well as physical balance.

Napoleon advanced rapidly from an unexpected direction, outmanoeuvred and beat the enemy within a week after the opening of the campaign and then chased the broken remnants of his army through north-eastern Germany. Before the battles, the enemy had little opportunity to reconsider his position, redeploy his forces or to wrest the initiative from Napoleon. The army was beaten before any effective countermove could have been carried out. After the battle, the surviving elements of the beaten army were not granted a respite to regroup and recuperate. Instead, they were hunted down and destroyed. Napoleon's operational art destroyed Prussia's armed force and broke the spirit of her generals. Prussian generals were in no sense prepared for this pace and intensity of operations. The destruction of the Prussians' mental balance was demonstrated by the meek surrender of various fortresses and Hohenlohe's capitulation at Prenzlau.<sup>77</sup>

Napoleon and Carnot shared many operational principles. Yet, there were some differences between their concepts of operational art. Whereas Carnot preferred having two armies operating in one theatre, accepting the risk that they could be beaten in detail, Napoleon had only one army, whose corps were always within supporting distance from

each other. Operating with a single army improved coordination among the corps, which was vital for operational art, because use of only one chain of command common to all corps increased the speed of communications and the decision-making process.

Furthermore, Carnot's two-army advances were designed for a pincer movement only, whereas Napoleon's operational deployment of corps in the *bataillon carée* was more flexible and offered more options. Whereas Carnot had often violated his own principles, Napoleon did not deviate without good reason. On 11 October, for instance, he left Lannes's and Augereau's corps temporarily isolated when the balance of the *Grande Armée* turned towards Gera. The reasons for doing so, however, were sound. If the enemy was indeed at Gera, the four corps closest to the town could advance and attack at once to prevent the Prussians from slipping away. Waiting for Lannes and Augereau to catch up with the rest of the army would have wasted time, could have led to the loss of initiative as well as surprise and would have reduced prospects to achieve the strategic objective, the rapid destruction of the Prussian army. Furthermore, the risk to Lannes and Augereau was limited since they had a considerable combined strength and were placed in very defensible terrain.

A further difference between Napoleon and Carnot was their comparative positions. Carnot had tried to control operations from Paris whereas Napoleon directed operations from army headquarters. Carnot had been a member of a collective government whereas Napoleon was the government, which enabled him to combine policies in such a way that optimal conditions for the success of operational art were created.

The maturity of Napoleon's operational art also becomes apparent in comparison with field commanders of the revolutionary period. Compared to Jourdan and Moreau, Napoleon used his operational instruments to much better effect. Whereas Jourdan and Moreau scattered their corps beyond supporting distance and failed to come to each other's support, Napoleon used the flexible and secure *bataillon carrée*. Whereas revolutionary generals had failed to drive the enemy into a hopeless situation, Napoleon forced the Prussian army to fight with their line of retreat blocked.

The success of Napoleon's operational art was not only due to his superior abilities but also due to advantages which commanders of revolutionary armies did not enjoy. Unlike generals of the revolutionary armies, Napoleon did not have to cope with interference from Paris. Nor was the effectiveness of the conduct of campaigns limited by court intrigues as during the Seven Years' War. Unlike revolutionary generals, Napoleon's marshals were not driven either to timid passiveness or to blind head-on attacks by fear of the *guillotine*. Instead, they were motivated by ambition and self-interest. Self-interest, though, was not always conducive to success. Bernadotte's failure to support Davout, for instance, was possibly motivated by the desire to see a rival destroyed.<sup>78</sup>

Napoleon enjoyed a further advantage compared with revolutionary generals. He was operating in a pristine theatre whose resources were yet untouched. Commanders of revolutionary armies frequently had to move back and forth over the same territory. Consequently, they were occasionally forced to conduct operations intended to procure supplies, or they had to besiege fortresses in order to capture the depots inside. Napoleon, in contrast, found plenty of supplies in Saxony and Prussia which allowed him to concentrate on his chief purpose, the destruction of the Prussian army.

Like Frederick, Napoleon appreciated the value of military intelligence and reconnaissance. Spies, newspapers, embassy reports, intercepted correspondence, *aide-*

*de-camps* on mission, interrogation of prisoners and deserters and cavalry patrols provided information. The advance on a broad front ensured that corps cavalry reconnoitred a broad swathe of country. In addition, the dragoons of the cavalry reserve could support the reconnaissance effort. The regular use of large numbers of French cavalry in front of the corps also prevented Prussian reconnaissance from divining the positions and movements of the *Grande Armée*.

In contrast to Frederick, Napoleon's reconnaissance was not frustrated by enemy superiority in light troops. However, fear of superior Prussian cavalry induced French cavalry patrols to stay close to the supporting infantry of the vanguard rather than scouting far ahead. After initial successes had shown Prussian cavalry less imposing than expected, French cavalry became bolder and intelligence improved.<sup>79</sup> Though many reports were reasonably accurate, a large number of obsolete, incorrect, exaggerated or even completely misleading reports blurred the picture and prompted Napoleon to make mistakes such as the assumption that the enemy was at Gera on 11 October, or that he was at Erfurt on 12–13 October. Though reconnaissance was not always of satisfactory quality, the skill of French cavalry had improved since the early years of the Revolution.<sup>80</sup>

Sometimes, Napoleon misinterpreted intelligence. When Napoleon fought the battle of Jena, for instance, he believed the forces under his immediate command were engaging the bulk of the Prussian army. This error cannot be laid at the door of French reconnaissance since Napoleon had little reason to make this assumption. He knew that the Prussian retreat towards Magdeburg had begun and Davout had confirmed this by reporting a Prussian army concentrating on Eckartsberg, which had pushed an advance guard towards the Kösen defile.<sup>81</sup> Furthermore, Lannes had reported no more than about 42,000 men in front of him, an estimate confirmed by Napoleon's personal inspection. Consequently, Lannes, Berthier and Napoleon shared the belief that at most 50,000 Prussians were facing Lannes on the afternoon of 13 October.<sup>82</sup> Where should the balance of the Prussian army be if not in front of Davout?

Failure of intelligence and reconnaissance as well as Napoleon's misinterpretations, however, did not thwart Napoleon's plans. Whereas Frederick had to react to poor reconnaissance by keeping his army concentrated, Napoleon was not forced to respond likewise. He did not even need to stop in order to wait for confirmation. The flexibility of the corps system, the suppleness of the *bataillon carrée*, the responsiveness of the staffs, the proximity of neighbouring corps and the strength of the individual corps permitted Napoleon to march confidently into the fog of war. Wherever and whenever he would encounter the enemy, his operational art ensured that his operational instruments would be able to react swiftly and effectively.

Since the Prussian army did not enjoy the flexibility and security inherent in the corps system, it was in more need of accurate intelligence. Lack of funds, one of the root problems of Prussian military effectiveness, made itself felt once more, this time in the very limited use of espionage. Nonetheless, the Prussians managed to gather some valuable military intelligence. Brunswick, for instance, became aware of French troop concentrations in the Bamberg-Schweinfurt area as early as 25 September. This report had been corroborated four times by 8 October.<sup>83</sup> In spite of these reports indicating a French attempt to bypass the Prussian left, Brunswick did not budge.

In general, Prussian reconnaissance was poorer than France's. The failure to locate I, IV and VI Corps, the cavalry reserve and the Guard on 12 and 13 October led to the underestimation of the threat approaching from the right bank of the Saale and induced Hohenlohe to deploy his command facing south and south-east rather than east. Keeping in mind that the Prussians knew since 10 October at the latest that the French threatened to outflank their left, that French forces had been reported at Naumburg, Camburg and Dornburg on 12 October and that the whereabouts of more than half of the *Grande Armée* was unknown, Brunswick should have been more concerned about his retreat towards Magdeburg and Hohenlohe should have worried more about his left flank. Consequently, short-comings in Prussian reconnaissance and intelligence cannot solely be blamed for defeat.

Understanding of the importance of regular reconnaissance and sending of reports was lacking. Activities of this sort had not played a role in peacetime training under Frederick William. Whereas French staffs sent patrols on a regular basis, furnishing Napoleon with a steady flow of information, Prussian reconnaissance was conducted only from time to time. Often, no patrols at all were sent out. On 11, 12 and 13 October, the most critical phase of the campaign, no proper reconnaissance was conducted. At other times, a handful of officers were dispatched to provide intelligence at the last minute when neglect of regular reconnaissance had left the army commanders stumbling in the dark. On 7 October, one lonely Prussian staff officer was sent south to find the French army. Some days later, the Prussians fell into the other extreme by dispatching significant forces towards Fulda and Schweinfurt in order to conduct a reconnaissance in force. These detachments would be too far to rejoin their parent armies for battle.<sup>84</sup> Lack of intelligence induced the Prussian high command to mark time rather than accepting the risk of uncertainty which Napoleon could tolerate due to the strength and flexibility of his corps system.

The insight into the importance of reconnaissance and reports was simply not part of Prussian attitudes. When shooting could be heard near Magdala on 12 October, nobody saw fit to enquire. Likewise, the Prussian commander at Dornburg did not bother to report Davout's advance on Naumburg. Prussian failures in reconnaissance may, at least in the opening stages of the campaign, have partly been due to the optimistic assumption that war might not come after all.<sup>85</sup>

The flexibility of Napoleon's operational instruments was well matched by the flexibility of his supply system. Usually, the corps lived off the country by requisitioning or by plunder. Increasing population density and agricultural output due to crop rotation, soil improvement, cultivation and the introduction of the potato permitted Napoleon to rely to a large extent on local resources as the revolutionary armies had done.<sup>86</sup> During the pursuit of the remnants of the Prussian army, supply became even easier with the effortless capture of fortresses and towns such as Naumburg, Magdeburg, Stettin and Küstrin.<sup>87</sup> When corps had to cross a barren stretch of terrain or had to concentrate for battle, a small supply train catered to their needs. For the march across the Franconian Forest, for instance, corps received supplies for eight days, carried in knapsacks and battalion waggons, when they passed through the centres of operations.<sup>88</sup> The *Grande Armée's* integrated supply train did not pose a considerable burden since no more than 300 vehicles accompanied the army, whereas a further 200 vehicles, augmented by

transport from the Confederation, stocked the centres of operations. A field train of 300 vehicles compared favourably with the several thousand vehicle convoys of Frederick.

Furthermore, the train did not delay the army by shuttling back and forth between corps and depots. Instead, it carried supplies with it and stayed with the corps. If an abundance of local resources was at hand, the food reserve on the train could be restocked.<sup>89</sup> The small size and organization of the train provided the corps commander with flexibility in supply without slowing the advance. Consequently, operational speed, surprise and initiative were not compromised. Between 9 and 13 October, I Corps marched 107 km, III Corps 140 km, IV Corps 174 km, V Corps 124 km and VI Corps 120 km. This rate of advance was by far not attained by the Prussians: on 14 October, Brunswick's leading division marched only 11 km in 9 hours.<sup>90</sup>

The short length of the corps supply column not only permitted rapid advance, it also increased operational flexibility by permitting one corps to cross in the wake of another corps. On 12–13 October, VI and IV Corps crossed the communications of I and III Corps. If these two corps had been followed by a long tail of trains, the move would have ended in chaos.<sup>91</sup> Speed was further improved by scuttling tents, baggage and scores of camp-followers which had slowed some revolutionary armies.<sup>92</sup>

A particular feature of Napoleon's supply system were the centres of operations (*centres d'opération*). These centres were fortified depots which contained supplies, equipment, ammunition, hospitals, transport and remounts. At the outset of the campaign, he established centres in Forchheim, Würzburg and Kronach. Though Napoleon was not too concerned about his army's communications with France, which ran from Strasbourg via Mannheim and Mainz to the centres, he ensured that communications between his army and the centres of operations were safe. Communications and centres were protected by Confederation troops, National Guard, *gendarmes* and reinforcements on the way to the corps.

Furthermore, the task of guarding communications was not much of a liability since Napoleon had several alternative centres of operations. If one was threatened, he could still rely on others. The availability of several centres also added to operational flexibility since they offered alternative avenues of advance and retreat. As he moved these centres forward as he advanced, his communications became neither overstretched nor vulnerable.

Since the *Grande Armée* subsisted mainly on the country, the centres were less important for rear supply than as strongpoints if the army had to retreat. In this case, the army would have fallen back on the centres where it would have been fed, remounted and re-equipped. These centres also played a role in Napoleon's scheme of deception: the establishment of a large depot at Mainz, for instance, misled the enemy regarding the line of advance.<sup>93</sup> The Prussians expected an attack from this direction and consequently extended their right wing further west, thereby enhancing Napoleon's chances to outflank them in the east. The line of communications along the Main valley served as a bait to tempt the Prussians to dispatch troops in an attempt to cut French communications. The Prussians did Napoleon this favour by sending a strong force under the Duke of Weimar as far as Schweinfurt. Weimar did not achieve anything since Napoleon simply switched his communications from the line Strasbourg-Mainz-Würzburg farther south, out of reach of Prussian raids. Consequently, the 11,000 Prussian troops detached from Weimar's abortive expedition advanced too far south to be present at the battle of Jena where they



were keenly missed. Like the operational instruments, the French supply system was ideal for the purpose of operational art.<sup>94</sup>

Whereas the French enjoyed all the advantages of being independent of rear supply, the Prussian army continued to be shackled by dependence on it. As long as the army was marching through Prussian territory, troops could be billeted and fed from local resources. Once the army had arrived in the theatre, however, rear supply became the rule. Though the degree of self-sufficiency was initially high, since the army began the campaign with a bread supply for nine days, troops became dependent on regular bread supply from the field bakeries once this initial complement was exhausted.

Whereas the *Grande Armée* was accompanied by 300 supply vehicles, the three Prussian armies had 1,398 bread waggons, 116 mobile ovens, 1,380 flour waggons and 240 miscellaneous vehicles. This placed the Prussian army at a disadvantage in several respects: movement was slow since the speed and range of supply trains dictated the pace. Communications were important so that their disruption was a serious threat. This threat probably induced Brunswick to commence the withdrawal which resulted in splitting the army into two and the subsequent destruction of its parts. Rear supply also hampered flexibility of manoeuvre. Rapid changes of direction were inadvisable since predictable schedules were needed to ensure the uninterrupted movement of the supply trains.<sup>95</sup>

Though Saxony was a fertile country, the Prussian army did not take any advantage of local resources. If troops would be permitted to forage on their own, it was feared, they might not return. Furthermore, discipline would suffer by men leaving the ranks to roam the countryside.<sup>96</sup> The ideal solution, orderly requisitions by authorized officers, was not desirable since the Saxon ruler could not be expected to agree to feeding the Prussian army at his cost. Local purchase of food, though briefly considered, was out of the question due to lack of cash. Again, financial restrictions put the Prussian army at an operational disadvantage. Since poor supply organization and staff work failed to provide the army with necessities, some officers tried to requisition food and fuel on their own initiative. This was strictly prohibited. Even collecting potatoes from fields already harvested were forbidden. So, Prussian troops had to suffer hunger and cold amid plenty.<sup>97</sup> Not surprisingly, some soldiers chose to desert whereas others began to plunder. Poor organization and the inflexibility of supply arrangements not only reduced speed and flexibility but also eroded strength and morale of the army.

A further problem which was not shared with the French adversary was the ball and chain of baggage. The Prussian baggage train was massive. A large number of pack horses, riding horses and carriages accompanied the army. Officers were even permitted to take such bulky items as field beds and tables with them. Each infantry regiment, for instance, was encumbered by 13 waggons, 293 horses and 173 non-combatants.<sup>98</sup> Bülow's and Scharnhorst's demands for shedding baggage in favour of higher mobility and speed, and for decreasing the dependence on rear supply had not been heeded.

The Seven Years' War had seen the Prussians travel relatively lightly and the French hampered by luxury baggage and camp-followers. Now, roles had been swapped. The French were travelling lightly and the Prussians were slowed down. Baggage clogged the roads, stretched the length of marching columns and slowed the army. During Brunswick's retreat north on 12–13 October, baggage played a major role in the defeat. Two roads were leading to Freiburg, one of them avoiding the Kösen defile. If Brunswick

had taken this road, he would not have encountered Davout, and the battle of Auerstädt would not have been fought. Brunswick, however, reserved the safe route for the baggage, leaving only the dangerous road for the army.

The continued reliance on tents also played a role in the Prussian defeat. Not only did tents add bulk to the baggage train, reliance on tents made the issue of coats unnecessary. Since baggage and tents had been lost early during the retreat, troops had no shelter. Consequently, they had to disperse in villages to take billets. To reassemble troops in the morning from their dispersed billets took time and permitted the pursuing French to close in. If the Prussians had discarded tents and relied on coats instead, soldiers could have bivouacked by the roadside, as the French did, and continued the march without delay the next morning. As it was, this organizational detail decreased relative operational speed, rendering French pursuit even more effective.<sup>99</sup> The millstones of rear supply and baggage made it very difficult for the Prussian army to counter the *Grande Armée*'s suppleness.

As a consequence of improvements of operational instruments and their use, the effectiveness of pursuit had also increased. Napoleon's operational art had severed the direct lines of retreat, forcing the beaten enemy to make long detours which reduced his prospects of reaching a safe haven to rally and recuperate. The concentration of superior numbers on the battlefield, the result of French manpower mobilization as well as Napoleon's operational art, provided him with a reserve of uncommitted troops which could be launched on the pursuit directly after battle.

The composition of the operational instruments also facilitated pursuit. The cavalry reserve was a powerful and instant pursuit force which could be launched on the evening of the victory at Jena. The army corps were also ideally suited for the pursuit role. Not only did they share with revolutionary all-arms divisions the advantage of having all arms available with them, enabling them to quickly destroy rearguards, they were even strong enough to follow the fragments of the Prussian army on widely diverging routes.<sup>100</sup> All-arms divisions would have been too weak to risk following in hot pursuit of an enemy force without keeping in supporting distance of other divisions. The necessity of staying in contact with other divisions would have reduced the speed and flexibility of the pursuit, since leading divisions would have had to wait for those farther back. If the French army had been organized along the lines of the divisional system rather than the corps system, Blücher's and Hohenlohe's commands might have escaped and joined the Prussian forces in East Prussia.

Corps, in contrast to divisions, were very strong. Once the enemy's main army had been destroyed, they could race after remnants of the Prussian army without regard to keeping in supporting distance of other corps, because they did not have to fear an encounter with a stronger force. The single-handed, almost casual destruction of Württemberg's command at Halle by Bernadotte's corps proved this point. The independence of corps in the pursuit frustrated Scharnhorst's and Blücher's plans to buy time for Hohenlohe to escape by drawing the French after them to Lübeck. The *Grande Armée* simply split, some corps destroying Blücher's command in Lübeck, the other corps hunting Hohenlohe.

### The tactical level

Napoleon's army corps were superior to revolutionary all-arms divisions in operational as well as tactical aspects. In operational matters, the strength of the army corps permitted their wide distribution which increased chances to outflank and encircle the enemy. Napoleon demonstrated this advantage when he barred the Prussian army's retreat by interposing Davout's and Bernadotte's corps between the enemy and his capital, thus increasing the chances for winning a decisive battle.

Since corps as well as all-arms divisions were operational instruments operating in a widely distributed manner, they could transform an operational turning movement into a tactical one. Napoleon clearly attempted to do this at Jena on 14 October. In the belief that the whole Prussian army was assembled at Jena, Napoleon ordered Davout and Bernadotte to continue their wide-ranging turning movement, and to advance into the enemy's left flank and rear at Apolda. If Napoleon's assumption had been right, this movement would have demonstrated the corps system's capability to extend the operational turning manoeuvre into a tactical one without stopping or reorganization. In the event, this did not happen because Davout encountered Brunswick's army at Auerstädt.

Even though the turn of events did not permit the corps to demonstrate this transformation of manoeuvres, they proved that their operational utility was matched by their tactical utility. Like all-arms divisions, army corps contained infantry, cavalry and artillery, which permitted close cooperation between all arms. Artillery was pushed far forward to pour canister into the Prussian ranks. This audacious use of artillery was possible partly due to the mobility of Gribeauval guns and partly due to the militarization of the artillery train. These guns were protected by a screen of skirmishers. Guns and skirmisher fire, in one place supplemented by the grand battery, weakened the enemy. Then, infantry columns of attack, covered by skirmishers in front and cavalry in the rear and flanks, attacked. Once the enemy line was broken, cavalry, supported by horse artillery, charged, exploited the breakthrough and routed the enemy. When they encountered a second line, the whole process was repeated. In this way, the commands of Tautzen, Grawert and Rüchel were destroyed in rapid succession. At Auerstädt, French tactics proved that they were suitable for the defence as well. Davout's infantry formed squares, supported by artillery and by skirmishers in hedges and houses. Corps cavalry stood by, ready to countercharge.

Tactical command and control of corps was even easier than that of divisions. Napoleon had to give orders only to the two, later four, corps present on the battlefield instead of directing every single battalion or squadron as in Frederician armies, or every single division as in revolutionary armies. Corps commanders received a brief directive, issued orders to their divisions, and these, in turn, directed their brigades. This adroit use of the chain of command, including the staffs at corps, divisional and brigade level, permitted Napoleon to distribute the burden of command and control, leaving him free to observe the course of battle and to intervene only when a tactical situation called for the involvement of more than one corps. The establishment of a grand battery of 25 guns of Lannes's, Augereau's and Ney's corps, for instance, was due to Napoleon's direct intervention. In other parts of the battlefield, corps commanders cooperated directly, for instance when Lannes and Ney combined their light infantry in order to take the village of Vierzehenheiligen, or when units of Lannes's, Augereau's, Ney's and Soult's corps cooperated in the destruction of Rüchel's army.

Not only did corps organization enjoy the same tactical advantages as the all-arms divisional organization, it was even superior. Army corps were much stronger. Each corps had 2 or 3 divisions, each with 3–5 infantry regiments and 8–14 divisional guns. In addition, the corps had 6–12 guns in the corps artillery reserve and 6–9 squadrons of light cavalry in the corps cavalry.<sup>101</sup> Whereas a divisional commander of the revolutionary period had limited opportunities to influence the outcome of battle, army corps commanders had such a degree of combat power at their disposal that their decisions could tilt the balance of battle. A further advantage of the strength of army corps was their ability to engage the enemy at once and fix him while the other corps came up for support. The battle of Jena, for instance, was begun with only Augereau's and Lannes's corps present, Soult's and Ney's corps arriving in the course of the battle. At Auerstädt, Davout even demonstrated that an army corps could fight a battle all on its own. De Broglie's divisions would have been too inflexible, and all-arms divisions of the revolutionary period too weak to perform in a comparable way.

A further strength of Napoleon's army organization as compared with the revolutionary organization was the availability of corps and army artillery reserves as well as a cavalry reserve. Whereas revolutionary armies had often dispersed their cavalry and artillery over the divisions, Napoleon had large concentrations of both at hand in order to use them for decisive effect. The cavalry reserve of the *Grande Armée* amounted to 108 out of 171 squadrons, organized in 6 cavalry divisions with horse artillery attached. These reserves were vital. At Jena, for instance, Napoleon used the artillery reserve to form a grand battery and soften the Prussian line, and then launched his cavalry reserve, augmented by corps cavalry, in a massive charge to break through the weakened formations. In this way, the Prussian right wing was severed from the centre, surrounded and forced to surrender.

Whereas tactics of revolutionary armies had still been largely attritional in nature, the concentrated use of the artillery and the cavalry reserve in Napoleon's tactics rendered battle less attritional and more decisive. The battle of Jena clearly bore out the decisive nature of battle: the Prussian armies of Hohenlohe and Rüchel were completely broken and scattered rather than worn down and pushed back. At Auerstädt, Davout could not crush Prussian opposition in the way Napoleon did at Jena because Davout lacked a cavalry and artillery reserve. An additional advantage of battle victory by rapid decision rather than gradual attrition was that Napoleon's troops were still fresh enough to be launched on an immediate pursuit.

In sum, the use of corps at the operational level drove the enemy into a disadvantageous position. At the tactical level, the corps then destroyed the army. Neither 'impregnable' positions nor difficult terrain could save the enemy.<sup>102</sup>

The success in battle was crowned by immediate pursuit at Jena and Auerstädt. Attrition and shock had been combined in such a way that the enemy's formations were fragmented rather than eroded. These tactics not only decided the contest more rapidly than the more attrition-based tactics of the revolutionary period, they also left the enemy more vulnerable to pursuit since broken formations could hardly conduct an orderly, fighting retreat. Most of the Prussian troops were completely broken and drained off the battlefield without any order. The few battalions which maintained order and tried to cover the retreat were rapidly destroyed by the combination of cavalry and horse artillery. Furthermore, in contrast to Frederician warfare, the superiority of French tactics left the

victorious army far less battered than the defeated enemy. At Jena, the Prussian army lost half of its effectives whereas the French troops engaged lost no more than one tenth of their number.<sup>103</sup>

In the context of pursuit, corps organization demonstrated its utility once more. An army organized into corps and subordinate divisions and brigades could be reorganized more quickly than Frederician armies because reorganization could simultaneously be conducted at several levels of tactical organization. Consequently, Augereau's, Lannes's, Ney's and Soult's corps could be launched on the pursuit soon after the Prussian retreat had begun. Even Davout's exhausted corps could quickly reorder itself and pursue the enemy for 16 km. Pursuit as close as this by whole corps made continued resistance by Prussian survivors hardly feasible. Only Bernadotte failed, once more, to play his role. Instead of responding to Davout's request to join the pursuit, he remained passive. If he had advanced only a few kilometres, the war would have been over for most of Brunswick's army.

Shortcomings of the early revolutionary period had been overcome. The troops no longer dispersed to plunder, and the cavalry had turned into a force more capable of pursuit than before. In combination, operational art, tactics and pursuit achieved the aim of annihilation. Operational art cornered the enemy, tactics fragmented his formations and pursuit obliterated the fragments. The key role in this combination was played by army corps and the staff system.<sup>104</sup>

Not only superior organization, but also superior training accounted for French tactical success. Apart from the vast amount of military experience which French troops and the officer corps had acquired in the course of the Wars of the French Revolution and the Austerlitz Campaign, realistic training had prepared the *Grande Armée* for war. Military exercises, some of them contested, had been conducted in whole corps and divisions in the camp of Boulogne, acquainting senior officers with leading large numbers of troops in combat. Most importantly, the permanent nature of divisional and corps organization had established a working relationship between light and line infantry, cavalry and artillery. The attitudes as well as the skills necessary for conducting combined-arms combat had been fostered.

Apart from war experience and realistic training, the quality of officer training had improved by increasing emphasis on military education. As a result of superior training, experience and selection, the French army surpassed its Prussian adversary not only in quantity, as the armies of the revolutionary period had done, but also in quality. There was no more need to rely on operational skirmishing since all French troops had become battleworthy. Weaknesses of the revolutionary period had been overcome. There was no more ideological prejudice against drill and discipline, no more interference with training.

In contrast to Frederician armies, the high quality of the French army did not imply that French generals had to husband their troops rather than risking losses in battle. In spite of increased training standards, trained soldiers were still replaceable, provided that a strong cadre of veterans existed. A third of the *Grande Armée* of 1806 consisted of recruits. Integrated into veteran units, however, recruits quickly learned their trade. Consequently, Napoleon did not need to avoid battle and losses due to intensive campaigning.<sup>105</sup>

Whereas Napoleon could take full operational and tactical advantage of the corps system, the Prussian army was organized into divisions similar to those of the revolutionary period. Scharnhorst had clearly perceived the utility of a strong cavalry reserve, but his council did not prevail. Consequently, cavalry and artillery had been dispersed across the divisions.<sup>106</sup> The Prussians aggravated this organizational disadvantage by their inexpert tactical use of divisions. The Prussian failure to use divisions properly at the tactical level became apparent in command and control as well as combined arms tactics. Instead of using the divisional organization by giving orders to divisions and expecting them, in turn, to brief their subordinate units, Prussian commanders gave orders to individual battalions and squadrons. At Auerstädt, for instance, Frederick William sent individual battalions of the two reserve divisions into the fray instead of dispatching a whole division and leaving it to the divisional commander how to use his subordinate units.

The Prussian mode of command had several disadvantages compared with Napoleon's system. Commanders occupied themselves with details rather than devolving command and control to divisional commanders and their staffs. The battle was very fluid due to the tactical flexibility of the *Grande Armée*, and Prussian commanders reacted too late due to their time-consuming command procedures. This was the same problem at the operational and the tactical levels. Prussian commanders did not make full use of the divisional system and divisional staffs for facilitating command and control. Consequently, the process of making decisions and giving orders was so prolonged that the reaction to a rapidly changing situation came always too late. This Frederician system of personal direct command and control failed in battle against an opponent as nimble as the French. The fact that individual Prussian units did not receive any orders at all in the course of the battle, and that Generals Tauentzien, Holtzendorff, Grawert and Rüchel and the Saxons were virtually fighting their own battles, is indicative of the failure of Prussian command and control.

At Auerstädt, the muddle in Brunswick's army's chain of command exacerbated the problem of command. When Brunswick was incapacitated in the early stages of the battle, he left a vacuum of command behind since Scharnhorst, as Brunswick's chief of staff the natural choice for replacing him, had been dispatched to rally broken battalions, which was hardly an appropriate occupation for a chief of staff. The king did not take full control either. The consequence was that each division fought on its own and was beaten one after the other by Davout who enjoyed firm and effective control of his corps.<sup>107</sup>

Apart from ignoring the divisions' advantages in matters of command and control, their utility for combined arms combat had also been overlooked. Instead of using the line and light infantry, the cavalry and the artillery of the divisions in close cooperation, the arms were separated and fought on their own. Brunswick's divisions, for instance, were deprived of their cavalry in order to form a pure cavalry formation under General Blücher's command. When this cavalry force attempted to break Davout's squares at Auerstädt without support from other arms, it was repulsed with heavy loss and fled, leaving Brunswick's divisions without cavalry protection. A similar mistake was made at Jena when Hohenlohe withdrew the squadrons of his subordinate divisions in order to create a large cavalry mass. This cavalry concentration was destroyed by a pre-emptive French charge, leaving Prussian infantry and artillery without cavalry support. As a

consequence, Grawert's infantry had to form squares in order to protect themselves from French cavalry, thus providing choice targets for French artillery and skirmishers.

Not only had the cavalry been separated from the infantry, line infantry was also deprived of light infantry cover. Instead of protecting the line infantry from French skirmishers by company skirmishers and fusilier battalions, as regulations rightly demanded,<sup>108</sup> most light infantrymen were sent to fight in the woods on the edges of the battlefield where they fought well but could not influence the outcome of battle. The village of *Vierzehnheiligen*, in the Prussian centre, whose defence by Prussian light infantry would have significantly aided the line infantry, was weakly held by a mere company of *Jäger*. The failure to support line infantry with light infantry turned Prussian line infantry into easy targets for French light infantry. The same mistake, separating line and light infantry, was committed at *Auerstädt* and it had the same consequences. The advice of Prussian theorists to closely combine line and light infantry had been ignored.

Like Prussian cavalry and light infantry, artillery failed to play a useful role as part of a combined-arms team.<sup>109</sup> Prussian artillery could not keep abreast with the other arms because its material as well as organization reduced its mobility. Instead of the light *Gribeauval* guns, Prussian artillery had heavy artillery material which was slowly dragged along by underfed horses. At *Auerstädt*, many of the heavy guns got stuck in soft ground which French *Gribeauval* artillery would have passed without a problem, leaving *Brunswick's* infantry without artillery support.<sup>110</sup> The unmilitarized Prussian artillery train was inferior to its militarized French counterpart as well. Prussian artillery drivers and horses were levied with the onset of the campaign. Both at *Jena* and *Auerstädt* the semi-civilian drivers tended to disappear with the horse teams whenever the situation became dangerous. Consequently, Prussian guns were immobilized, which not only prevented close cooperation with the other arms but also prohibited the retreat of the artillery when capture threatened.

During the retreat, the advantages of divisional organization were ignored once more. At *Auerstädt*, where the lack of a cavalry reserve prevented Davout from exerting as intense a pressure on the enemy as Napoleon did at *Jena*, Prussian troops would have had sufficient opportunity to reorganize their divisions and retreat in good order if only divisional commanders and their staffs had been more experienced in the use and command of divisions. Instead, troops drained off the battlefield in growing confusion.

Whereas the *Grande Armée* was superbly prepared for war, the Prussian army's training had been inefficient and unrealistic. Victories gained in the Wars of the French Revolution and the Polish campaigns had obviously fostered complacency. Instead of conducting contested exercises, which had been usual under Frederick the Great, the annual reviews were meticulously planned months ahead. There was no room for initiative or flexibility. Officers at all levels simply followed the sequence of motions laid down in the review plan like a ballet company giving a performance. This kind of training produced officers unable to react to unforeseen circumstances or to show initiative.

The age structure of the officer corps further reduced room for manoeuvre of junior officers since old superiors tended to be conservative and intolerant. The irritation of the infantry regulations' authors with junior officers who questioned or discussed orders rather than simply carrying them out was probably shared by most senior officers.<sup>111</sup>

Under such circumstances, bold, independently thinking, enterprising and flexible officers were unlikely to prosper.

Fusilier battalions were exceptional in this respect. Here, subalterns received a training more thorough and comprehensive than was necessary for their position, enabling them to look beyond the narrow confines of their daily routines. Officer training in general had gradually improved.<sup>112</sup> On balance, nevertheless, the Prussian officer corps was hardly prepared to face an opponent as nimble and efficient as the *Grande Armée*. As a consequence of this mental immobility, Napoleon at Jena and Davout at Auerstädt could seize and maintain the tactical initiative to the detriment of their Prussian adversaries.

Exaggerated emphasis was put on spit and polish. Though infantry regulations recommended concentration on the essentials rather than the paraphernalia of training, advice which theorists vociferously supported, many commanders were more interested in perfection of appearances rather than tactically useful skills. It was, for instance, not uncommon to order infantrymen to loosen the screws of the muskets in order to create an impressive clatter when performing drill movements.<sup>113</sup>

Petty-mindedness had even operational consequences. Brunswick, for instance, reduced Prussian operational speed by insisting on time-consuming formalities in issuing orders. On one memorable occasion, Brunswick wished to announce the password of the day to the waiting officers. Prussian regulations prescribed that a non-commissioned officer and a specific number of men had to cordon off Brunswick and the officers during the announcement. Since the prescribed number of soldiers could not be found, some time was lost until the number could be completed. Brunswick would still not go ahead because the non-commissioned officer commanding the cordon did not have his regulation pike with him. More time was lost until a pike could be found. Finally, when all formal requirements had been fulfilled, Brunswick announced the password.<sup>114</sup> Not to be outdone by Brunswick, Rüchel stopped and mustered his troops before passing towns and villages in order to ensure their immaculate appearance.<sup>115</sup>

Tactical training was not only undermined by predictability, orthodoxy and emphasis on appearances, combined arms combat, which was so important for French tactical successes, was not practised. Regimental parochialism and disdain for the other arms combined with the lack of permanent mixed formations, such as divisions or corps, prevented the development of a spirit of cooperation and mutual understanding as well as the skills necessary for effective all-arms combat. The consequences of these shortcomings could be observed at Jena and Auerstädt.<sup>116</sup>

The blame for the ineffectiveness of Prussian training should not exclusively be laid at the doors of the officer corps. Economic considerations, which had reduced annual training time to six weeks, played an important role as well. Want of time notwithstanding, if drill had been pruned as radically as Berenhorst and Bülow had demanded, the six weeks' training per year could have prepared the army better for what lay ahead.

## Summary

Whereas the revolutionary government had adopted a battle-seeking strategy, implemented by operational art, in a moment of mortal danger, Napoleon relied on the



same means for different reasons. He used operational art in order to appease the French public by rapid and inexpensive victory, which is an example of the impact of non-military considerations on the evolution of operational art. Though the degree of control which Napoleon enjoyed would have permitted almost total mobilization, he restricted the effort with public opinion in mind. Nonetheless, even limited mobilization provided him with the mass army which he needed for the successful conduct of operational art. The mobilization effort also took advantage of human resources. Napoleon enjoyed the services of a professional officer corps which was open to talent and ambition, liberated from the ideological ballast of the revolutionary era. This was the officer corps required for leading mixed formations, making the staff system work and conducting all-arms combat. Here, the impact of non-military characteristics, in the form of the meritocratic character of Napoleon's social order, on operational art was obvious. Meritocracy invigorated not only his officer corps but also the rank and file. Their positive motivation had an impact at the operational level since forced marches and living off the country could be conducted without fear of rampant desertion. Not only was the quality of operational instruments improved, Napoleon's universal control also permitted him to coordinate all policies, such as diplomacy, social, economic and education policy, for strategic purposes, which considerably improved conditions for operational art.

Prussia, in contrast, due to the weaknesses of her government as well as financial restrictions, failed in integrating policy and strategy, mobilizing a mass army, creating effective operational instruments and making full use of talent and ambition. Thus, in Prussia's case, non-military characteristics prevented the evolution of operational art. The Prussian military establishment had not heeded the advice given by commentators such as Scharnhorst and Bülow. Only Scharnhorst's suggestion to establish all-arms divisions had been accepted in principle, but without any proper understanding of its tactical and operational potential.

With the improvement of operational instruments and the end of political interference, Napoleon's *Grande Armée* was ahead of revolutionary armies as well as the Prussian army. French army corps and staffs as well as the French supply system were ideally suited for operational art. In line with operational instruments, French generals had improved their skills in using them. The slow, cumbersome and inefficient Prussian enemy could now be destroyed by the fluid processes of operational manoeuvre, battle and pursuit.

Bülow's and Guibert's observations on the direct link between manoeuvre on the approach to and on the battlefield had been proven more clearly than before. The improvements of French operational instruments not only facilitated this process of transformation, these instruments also proved to be tactically more efficient than the all-arms divisions of revolutionary France and Prussia. Instead of the largely attritional combat of the Frederician and revolutionary periods, tactics had improved to the point that the enemy army was crushed and its fragments mopped up by immediate and forceful pursuit. Finally, the combination of operational art and tactics resulted in decisive victory in battle.

## 4

# PRUSSIAN REFORMS

The previous chapter has demonstrated how the superiority of Napoleon's operational art resulted in the crushing defeat of the Prussian army. This chapter will discuss the impact of the Prussian reforms from 1807 to 1813 on the evolution of operational art. It will be shown how civil reforms and military reforms, reinforcing each other, created conditions, such as meritocracy and the socio-political conditions for a mass army, in which the operational instruments—army corps and a staff system as well as a highly trained officer corps—could be forged. First efforts in the field of operational theory will also be discussed. Throughout the chapter, parallels between the French reforms after the Seven Years' War and the Prussian reforms will be drawn. Likewise, the interplay between theory and practice, reinforced by the experience of 1806, as well as the interrelation between military and non-military developments will be a recurrent theme.

Prussia's situation after the defeat was much worse than France's after the Seven Years' War. Consequently, the pressure for reform was even stronger. The total defeat of the Prussian army, followed by the almost complete collapse of military and civil resistance in Prussia, convinced those who had recommended reforms for years that a major overhaul of the Prussian state and society was imperative.<sup>1</sup> The Prussian monarchy had to be reinvented if it was to continue to hold its own. Not only did the reformers react to external pressure for reform, the apparent indifference of much of the population to the fate of king and country and the willing collaboration of the bureaucracy with the French conquerors also demonstrated the need for thorough reform.<sup>2</sup>

The reformers' disappointment about the Prussian population's lack of resistance to the victorious French demonstrated a set of expectations different from that of Frederick's times. Frederick would not have expected his population to render resistance. He even punished peasants who had fought the French army in the Seven Years' War because he believed that civilians had no place in warfare.<sup>3</sup>

Unlike the aims of the French Constitutional Assembly of 1789, the aim of the reformers was not to liberate the Prussian people, but to reinvent the Prussian state in a way that would permit the House of Hohenzollern to maintain its position in a changing world. Similar to Turgot's attempts to reform the *ancien régime*, revolution from above was meant to forestall a revolution from below. The key to this objective was 'bureaucratic nationalism': the country would be united by a common administration, common laws and taxes, personal liberty, equal rights and duties. On the firm basis of this harmonious national community, uniting king, army and people, the rejuvenated

monarchy could prosper. Hardenberg's call for democratic principles under a monarchic government expressed this idea most clearly.<sup>4</sup>

In order to install the new Prussia, a number of secondary aims had to be achieved: first, the power and the range of control of the state had to be expanded by creating an effective central government and administration that would overcome feudal and provincial privilege. Second, the ossification of Prussian society and economy had to be replaced by social and political dynamism which should become a source of strength for the Prussian state. Third, the Prussian army had to be turned into a force equal to the military challenge posed by Napoleon's art of war.

The driving force of civil reforms was the bureaucracy headed by Stein and Hardenberg. In 1806–1807, when the traditional alliance between king and nobility had failed, reform-minded bureaucrats such as Stein and Hardenberg saw their window of opportunity to persuade the king, stunned by defeat, to embark on major reforms of state and society.<sup>5</sup> Similar to the military reformers, Stein and Hardenberg drew on indigenous as well as French ideas, on the political philosophy of Kant, on the one hand, and on Turgot's reform programme on the other.<sup>6</sup>

Stein's programme, laid down in the *Nassauer Denkschrift* of 1807, resumed and expanded on his earlier reform attempts. Central government had to be overhauled. Instead of a motley of state and provincial institutions, functional ministries had to be created. The propertied classes should take part in administration and government in order to bridge the gulf between people and state, to turn the subject into a citizen. Giving the propertied and educated classes a stake in the state should foster patriotic and nationalist loyalties.

Furthermore, participation of educated strata would tap a vast pool of experience and talent, mobilizing intellectual and spiritual forces, which had hitherto been merely engaged in private pursuits, for the good of the state. Public participation in local government would also provide public opinion with an opportunity to voice grievances, permitting an early response to domestic unrest. The serfs should be liberated and ought to own the soil they were ploughing to pave the way for progress in agriculture.

As part of the drive to strengthen the central bureaucracy, the lords' patrimonial justice should be replaced by state courts. The guild monopoly had to be broken to unshackle market forces. The Poles should be granted cultural autonomy in order to win their allegiance. A national army, based on universal military service, would be established. True to the overriding priority of strengthening public acceptance of the monarchy, Stein wanted state-run schools to instil nationalism and monarchic loyalty from a tender age, so that sacrifices in property and blood would willingly be made for the king.<sup>7</sup>

Hardenberg's programme had much in common with Stein's proposals.<sup>8</sup> He largely shared Stein's views on personal liberty, public participation in government, *laissez-faire* in economic policy, agricultural reform and state control of schools. Hardenberg paid particular attention to breaking provincial privilege and identity in favour of a unified state by introducing a universal tax code, a universal body of law and by strengthening the central bureaucracy. With regard to military reform, his proposals were bold: exemptions should be abolished, though substitutes would be permitted. The army should be turned into a militia, non-commissioned officers would be elected from the rank and file, officers from the non-commissioned officers. Hardenberg also explicitly expressed

the purpose of the reform programme by stating that the Prussian monarchy had either to adapt by reconciling the monarchy with the democratic idea, or to perish.<sup>9</sup>

Both Stein and Hardenberg discussed universal military service in the context of nation-building. It is not clear whether nationalism was meant to support the creation of a mass army for military purposes, or whether the national army was, like the state school, one more instrument for instilling ‘bureaucratic nationalism’. In the event, the successful efforts to create a national mass army proved to be crucial for the establishment of operational instruments.

Like the French reformers after the Seven Years’ War, Prussian reformers soon encountered the opposition of all those interested in maintaining the *status quo*. Opposition to the reform process was aimed at a range of specific issues and was based on a variety of social groups: royal advisers feared losing influence to the ministries. The provincial nobility resisted the encroachment of the central bureaucracy on their patrimonial powers as well as the abolition of tax privileges. Noble officers resented the meritocratic principle in selection and promotion. Craftsmen opposed the abolition of the guild monopoly. Serfs distrusted agricultural reforms.

Universal military service united the classes in opposition: the land-owning nobility feared the loss of labour; the traditionally exempt classes showed little taste for soldiering.<sup>10</sup> The *Landsturm*, an institution for the establishment of irregular formations for guerrilla warfare, provoked even more hostility: the higher strata of society resisted the *Landsturm*’s egalitarianism and feared it might turn against the propertied classes. The king was afraid that the irregulars might turn their arms against the monarchy rather than against the French. Bureaucrats disliked the interference of the *Landsturm*’s local defence committees in administration. Officers were sceptical about the prospects for successful guerrilla warfare.<sup>11</sup>

Though the king clearly perceived the need for change if Prussia was ever to regain the status of a major power, he tried to retain as much of Prussia’s social and political order as possible and made only those concessions he considered unavoidable. His willingness to promote reform stood in direct relation to the waxing and waning of the French menace. With Napoleon’s demise, the transition process was stopped and even partly reversed. The king’s lack of conviction, combined with obstruction and resistance by the old *élites*, considerably hampered reforms: the revamping of the tax code had to be abandoned, the principle of universal service was diluted and the *Landsturm* idea was as good as dead.

The patterns of change and opposition clearly showed the impact of social and political forces on the course of military reform. Though the opposition of the officer corps against meritocracy and the generals’ opposition to the rise of the staff officer, both deleterious to prospects for developing operational instruments, were overcome, the crusade against the *Landsturm* was largely successful. In an operational context, the *Landsturm* would have made a difference: it would have liberated the regular army and the *Landwehr* from performing secondary tasks such as the protection of territory, leaving those first-line forces free to operate in mass. The *Landsturm*, by applying a scorched earth policy, would also have restricted the operational flexibility of French invaders who were very dependent on local resources. In the case of the *Landsturm*, non-military influences, social and political conservatism, had prevented military progress. Issues of conviction apart, petty jealousies and self-interest also undermined the unity of

reform circles. Personal hostility went so far that Scharnhorst and Gneisenau had to defend themselves against charges of attempted revolution.<sup>12</sup>

The Prussian military and administrative *élites* were not simply split into reformers on the one hand and conservatives on the other hand. Instead, the camps overlapped. General Yorck, for instance, did sterling work as the father of Prussia's modern light infantry, but he fought social reforms tooth and claw.<sup>13</sup> Many leading bureaucrats who actively assisted Stein in his social and economic reform programmes viewed universal conscription with abhorrence. One of those sceptics, Baron Vincke, prophesied that conscription would become the tomb of culture, sciences, trade, liberty and human happiness. The descent into barbarism would be certain. Other high-ranking administrators shared this view.<sup>14</sup>

Apart from domestic opposition, the reformers were hampered by a restrictive peace treaty which was the result of total defeat. The Convention of Paris of 8 September 1808 stipulated that Prussia had to cede half her territory and population, pay an indemnity of 141 million francs, limit army strength to 42,000 men and accept French garrisons in key fortresses.<sup>15</sup>

The loss of territory and taxpaying subjects, added to the huge indemnity to be paid, ruined Prussian state finances. In 1807–1808 alone, the French extracted in contributions, reparations and requisitions about 16 times the annual revenue of pre-war Prussia. The situation was so desperate that selling Silesia to France was seriously considered.<sup>16</sup> Even more indicative of Prussian desperation was the offer to send a Prussian auxiliary corps to Spain in exchange for a reduction in contributions.<sup>17</sup>

This insolvency had a deleterious effect on military reforms since lack of cash forced the king to maintain the army at a very low level of readiness with up to half of its already small number of officers and troops on furlough. Though individual training in marksmanship and *tirailleur* skills improved, the skeleton companies were often not large enough to undergo effective unit-level training. Training in whole brigades and corps was rarely feasible. The soldiers on furlough had to do with even less training. In the cavalry, most horses were given to peasants for agricultural work with the result that the training standard of horse and horseman was low.<sup>18</sup> The net effect of these financial limitations was a reduction in the size and training standards of the Prussian army. Therefore, French standards of tactical and operational effectiveness were hard to achieve—an example of the negative impact of economic factors on military progress.

Whereas insolvency slowed the process of military reform, its effect on civil reforms was positive since reformers such as Stein and Hardenberg could convince the king that political, social and economic reforms were essential to bolster the economy and increase revenue. Stein, for instance, calculated exactly how much money could be saved by replacing the urban bureaucracies with institutions of self-administration.<sup>19</sup>

Another obstacle to military reform was the occupation. The presence of French troops and the military vulnerability of Prussia to French punitive actions forced the king to adhere strictly to treaty obligations. Plans of the reform commission for the establishment of a militia and the introduction of universal conscription, both important preconditions for raising a mass army and introducing the corps system, were impossible to realize as long as French supervision remained. The occupation force also directly intervened in the reform process by demanding the dismissal of Prussia's most ardent reformers, among them Scharnhorst and Stein.<sup>20</sup>

Not only did French intervention thin the ranks of the reformers; the apparent meekness of the king in the face of overwhelming French superiority, particularly the signing of the alliance treaty with France in 1812, had the effect that some reformers, among them Scharnhorst, Gneisenau, Boyen, Grolman and Clausewitz, resigned in disgust, some of them entering foreign service in order to continue the struggle against Napoleon. A fourth of the Prussian officer corps, possibly the most reform-minded part, chose this course of action.<sup>21</sup>

The presence of French troops also proved an additional economic burden since the occupation force consumed resources of an already impoverished country. Hunger riots in Berlin and elsewhere were the consequence.<sup>22</sup> Possibly, the spectacle of social unrest in the streets of Berlin confirmed the king's instinctive social conservatism and kindled his fears of a creeping revolution, fears which contributed to choking the *Landsturm* idea in the cradle—another example of the impact of social and political considerations on military reform.

Nevertheless, much of Stein's and Hardenberg's reform programmes were gradually translated into law. An impressive list of reform laws between 1807 and 1812 was the fruit of their efforts. The new laws permitted persons of any class to own every kind of property including land, established the freedom to choose one's profession, broke the monopoly of the guilds, declared the abolition of serfdom, granted equal rights to Jewish citizens, distributed the tax burden in a more equal way by imposing a land tax on landowners,<sup>23</sup> secularized church property, granted self-administration to the towns and cities, established five central ministries headed by a prime minister (*Staatskanzler*) and promised, for the first time in Prussian history, a national representative body.<sup>24</sup>

Yet, the degree of real change fell far short of the aims expressed in the reform programmes. Agricultural reforms had been diluted to such a degree by the opposition of the landowning nobility and *bourgeoisie* that the serfs were turned into a rural proletariat which was even more dependent on the lord than ever before, instead of turning into the independent and productive farmers envisaged by Stein.<sup>25</sup> The attempt to create a dynamic and enterprising middle class like that flourishing in Great Britain failed. The higher strata of the middle class were absorbed by the nobility, the rest tried to imitate the aristocracy instead of counterbalancing it.<sup>26</sup> Economic reforms met with some success in the long run. The end of the guild monopolies opened the way for new means and ways of production. The right to own land as well as the availability of a rural proletariat reinforced capitalist tendencies in agriculture. The liberalization of trade and commerce brought the economy closer towards the Smithonian ideal.<sup>27</sup>

Reforms of the central bureaucracy were partly successful. On the one hand, the establishment of ministries and the reduction of provincial privilege were successful; on the other hand, the general tax reform was largely dismantled.<sup>28</sup> Political reform did not even come close to the reformers' ideal of a state administered by participating citizens. Though self-administration was introduced in towns, there was no equivalent in the countryside. The attempt to establish a national assembly was abandoned after a half-hearted attempt.<sup>29</sup>

The reason for the incomplete success of the reforms was that the resistance of the old *élites*, combined with the conservatism of the king, had slowed the civil reforms to such a degree that the driving cause for radical change, Napoleon's overwhelming power, had receded before the transition had run its course.<sup>30</sup> Though by far not all expectations of

the reformers had been fulfilled, the reforms had been successful enough to cement the power of the Hohenzollern dynasty, and this had been their purpose all along.

The continued allegiance of the Prussian nobility, though bought at the cost of diluting social and political reforms, was important for the survival of the monarchy. Whereas reform attempts under Louis XVI had eroded the loyalty of the French nobility and resulted in the downfall of king and aristocracy, the Prussian nobility were to remain loyal to their king until Germany became a republic in 1918. French reform attempts had ultimately destroyed the monarchy; Prussian reforms had given it a new lease of life. A further reason for the difference between the outcomes of the French and the Prussian reforms was that in France, the Third Estate took part in the power struggle, whereas in Prussia, the battle for influence was fought within the triangle of monarchy, bureaucracy and nobility.<sup>31</sup>

The case of Prussia shows that a middle-class society was not a necessary requirement for creating conditions, such as mass armies and meritocracy, which were important for forging operational instruments such as army corps and a staff system. The success of Prussian reformers in preparing Prussia for a war of survival without the monarchy falling victim to revolution was largely due to 'bureaucratic nationalism', reinforced by a popular desire for revenge. In 1813, the desire to liberate the country from French occupation united all classes. The Prussian brand of nationalism was royalist, as the reformers had hoped. The battle cry of Prussian regulars, *Landwehr* and volunteer *Jäger*, was 'With God for king and country'.<sup>32</sup> The anti-royalism inherent in the French brand of nationalism, in contrast, reflected the impact of the French Revolution.<sup>33</sup>

In 1813, the improved efficiency of the Prussian state machinery, another success of the civil reforms, was proven by an astonishing degree of mobilization. Social and political reforms had played their role in increasing Prussia's military effectiveness. A similar process could be observed in France between the end of the Seven Years' War and the French Revolution: military defeat, combined with social and economic problems, ultimately resulted in radical socio-political change, which, in turn, led to the creation of operational instruments and their use in operational art.

Following the crushing defeat, the king appointed a Military Reorganization Commission (*Militär-Reorganisationskommission*), headed by Scharnhorst, on 25 July 1807.<sup>34</sup> The circle of reformers, however, was not confined to the Commission. Other officers such as Yorck and La Roche-Aymon contributed their knowledge and ideas in their fields of expertise. The leading civil reformers, Stein and Hardenberg, also took a keen interest in military reforms, maintaining a lively correspondence with Scharnhorst and Gneisenau.

As a guideline for the commission's work, Frederick William had presented a list of 19 items he wished to see considered. The list included a range of aspects, such as the punishment of unworthy officers, changes in the selection and promotion process, opening officer rank for commoners, a reform of the recruitment system, a higher degree of manpower mobilization, a reform of military punishment, an overhaul of military administration, an improved balance of arms in large formations, the establishment of army corps, the reduction of baggage, enhanced mobility of field artillery, militarization of the artillery train and training in marksmanship.<sup>35</sup> Prince August of Prussia also contributed to military reform plans. His *Soissons Memorandum* was based on a thorough analysis of Prussian weaknesses and French strengths. The prince suggested a reform of

military administration, universal conscription, the end of aristocratic privilege in favour of meritocracy, motivation by appeals to patriotism and honour instead of coercion, realistic exercises and combined arms tactics. Operational flexibility should be improved by reduction of baggage and the adoption of either a modified system of rear supply or living off the country according to circumstances.<sup>36</sup>

Due to Scharnhorst's dominating position and the cooperation of like-minded officers such as Gneisenau, Boyen and Grolman in the commission, he had ample opportunity to turn his ideas, most of which he had first expressed long before 1806, into practical reform proposals. Scharnhorst's ideas were, to a considerable degree, the result of his military experiences of the Wars of the French Revolution and the Jena Campaign. Like Guibert's influence on French military reforms, Scharnhorst's impact on Prussian military reforms presents a fine example of the interplay between military theory and practice in the evolution of operational art. Scharnhorst and the other reformers, however, did not draw all their recommendations from the observation of the French example, though this, of course, had a profound influence.<sup>37</sup> The reformers could also hark back to Prussian tradition such as the Brandenburgian guerrilla warfare against the Swedish army in 1675 or the old canton laws of Frederick William I. The Prussian system of universal military service showed this amalgam of Prussian tradition and French example.

Like Stein, the circle of military reformers around Scharnhorst believed that comprehensive reforms of state, society and army had to go hand in hand. Military rejuvenation, being part of this total effort, contributed its part to creating the new bond between state, people and army. As in the civil reforms, the force of nationalism was to be harnessed for the purposes of the state.<sup>38</sup> The cement of nationalism, binding king, people and army together, would make Prussia invincible even if the army should be beaten in the field. If the nation became the army and vice versa, it could be defeated but never conquered. The experience of total resistance of revolutionary France against the invaders, witnessed by Scharnhorst, confirmed by the more recent examples of Spanish resistance, had left its mark on the reformers.

Universal military service obligations had existed in Prussia since the times of Frederick William I; but due to an increasing number of exemptions and a strong reliance on foreign mercenaries, military service had become increasingly selective. With universal conscription, this was bound to change: the citizen, and this meant everybody, was the born defender of his country.<sup>39</sup> Conscription, a cornerstone of military reforms, was meant to build a nation, or, in Clausewitz's words, to become the school of the nation. Though the army had never been a foreign body in the Prussian population, taking into account that a large percentage of the Prussian population consisted of soldiers and cantonists and their families, there had been a rift between the classes liable to service and those exempted. While conscription and meritocracy would tie the bond between army and people, civil reforms reconciled state and people.

In military as in civil reform, the basic idea was to ask the population to take an active part in the affairs of their state, in war and in peace, in politics and in defence. In the case of conscription, the logic of these two efforts would converge: conscription would harmonize relations between army and people, whereas the bond between state and people would make conscription tolerable. A reform of military justice, which had until then granted the army the status of a state within the state, delivered its share in redefining the relationship between army and population. Taken together, these efforts



should create a nation waging a national war with a national army for a national purpose.<sup>40</sup>

Conscription, however, was meant to be more than a by-product of nation-building. It fitted in with the efforts of Prussian reformers such as Scharnhorst and Knesebeck, in the period before 1806, to counter the threat of the French mass armies by creating a Prussian mass army. Apart from ideological considerations, this mass army could not be a mercenary army simply because Prussia could not afford it. Therefore, some form of conscription was necessary to reconcile military demands with economic constraints. Combined with the thrust of the civil reforms, conscription was an admirable solution: it helped building the nation, it provided Prussia with a mass army and it was affordable. The theme of universal military service and nationalism had also long been familiar from the writings of Scharnhorst, Berenhorst, Bülow, Knesebeck and Guibert. Due to this interplay between military and non-military considerations, theory and reform, a mass army, a helpful institution for creating operational instruments, was to be built.

In order to render conscription acceptable to hitherto exempt classes, the middle class in particular, it was necessary to improve the image of the Prussian army, whose soldiers were considered by the exempt classes to be do-no-gooders living in constant fear of the corporal's stick, a picture which was rather bleaker than reality. Stein professed a minority opinion when he pointed out that corporal punishment could not be considered dishonourable since the Romans and even the Teutonic Order had relied on it. Taking into account the attitudes of the exempt classes, a reform of the system of military discipline and motivation was necessary. The soldier should be motivated by the example of his officers, by national pride, personal honour and, a consequence of the meritocratic principle, by ambition. Punishments considered dishonouring should disappear. Flogging was replaced by arrest. Repeat offenders who had proven themselves unworthy of the national cockade could be demoted to second-class soldiers, who remained subject to physical punishment. This honourable army would be fit to receive the sons of society's higher strata.<sup>41</sup>

The reform of military discipline and motivation received support from those Prussian officers, among them Scharnhorst, who had been calling for this kind of reform for years, considering that features of modern warfare, such as open-order tactics, called for positively motivated soldiers. Again, military and socio-political considerations, reinforced by military theory, had the combined impact of driving the modernization of the Prussian army.

In spite of these efforts to make military service acceptable to the formerly exempt classes, the reformers were aware that the educated strata of society would still be reluctant to serve side by side with illiterate farmhands. Consequently, social stratification was reflected in the new organization of the Prussian army in order to gradually accustom the formerly exempt classes to military service, even though Stein was opposed to this concession:<sup>42</sup> the classes liable to canton duty would continue to be drafted into the regular army, whereas the affluent among those hitherto exempted would serve in volunteer *Jäger* detachments. Similar to the French National Guard of 1792, volunteer *Jäger* should arm and equip themselves and should elect their own officers and non-commissioned officers. As an added enticement for the educated and affluent, volunteer *Jäger* would be considered candidates for non-commissioned and commissioned rank in the regular army.<sup>43</sup> The less affluent among the hitherto exempted

would serve in the *Landwehr*.<sup>44</sup> In the case of army organization, as in the *Landsturm* question, socio-political considerations hampered military reform, though not to a significant degree.

On 9 February 1813, all exemptions were suspended for the duration of the war. All men would have to serve in either the army or volunteer formations. On 17 March 1813, the *Landwehr* was officially established. Each district would have to form *Landwehr* units corresponding in size to its population. If the number of volunteers would be insufficient to fill the ranks, the ballot should be used. On 21 April 1813, a much-diluted version of the *Landsturm* was established. All men not serving in army, *Landwehr* or *Jäger* formations, were bound to render support by rear echelon duties and, in case of invasion, by conducting guerrilla warfare against the invader. On 3 September 1813, universal conscription for the duration of the war was introduced. On 3 September 1814, Prussia's first permanent law on universal military service was announced.<sup>45</sup>

Since the introduction of conscription was not possible under the terms of the peace treaty, the Prussian army had to find another way of creating trained reserves in the short term. The *Krümpfer* system, originally invented for financial reasons rather than as an attempt to evade treaty restrictions, would provide trained reserves, better suited for rendering the operational instruments effective than the masses of raw recruits which would stream into the army, *Landwehr* and *Jäger* detachments when war broke out in 1813. According to this system, three to eight trained soldiers per company were dismissed every month and replaced by cantonists, who, in turn, were replaced by other cantonists after a month's training. In order to prevent the dismissed cantonists from forgetting their skills, officers and non-commissioned officers should hold regular training sessions on Sundays and holidays in the villages. After the Convention of Paris, which limited Prussian army strength to 42,000 men, the *Krümpfer* system offered the additional advantage of exceeding the limited number of trained men without violating the treaty. In 1812, there were 33,000 *Krümpfer* available, though their training standard was not quite as high as that of the active army.<sup>46</sup>

Material mobilization had to keep abreast with manpower mobilization in order to arm the prospective mass army. Before the war, muskets had been produced at a rate of 1,000 per month. This rate increased to a production rate of 1,300 muskets and a repair rate of 1,800 per month. The number of available muskets increased from 10,000 in 1807 to 75,000 by 1810. This rise in production had been achieved even though some arms factories were no longer on Prussian territory and others had been vandalized by the French.<sup>47</sup> Arms production was one of Scharnhorst's personal domains, besides heading the Military Reorganization Commission, being chief of the general staff, chief of the engineer corps and inspector of fortresses. This made Scharnhorst, like Carnot, an organizer of victory.

Apart from efforts to mobilize manpower, the reformers also tapped into spiritual forces as revolutionary France had done. Nationalism and meritocracy should fulfil this function.<sup>48</sup> Supporting the effort to foster nationalism by conscription was Gneisenau's proposal to militarize the schools. Schools should teach mathematics for military purposes, introduce military discipline, drill and physical training. Apart from providing useful pre-military training, which would shorten the recruit's training time in case of mobilization, schools would instil nationalism in the Prussian youth, an idea echoed by Stein.<sup>49</sup> The idea of instructing the male youth in military arts and sciences as well as

instilling national loyalty and moral virtues was not new. Bülow and Knesebeck had already made suggestions to the same effect.

The theme of virtues was generally popular in Prussia. Ancient beliefs that God would help the virtuous became a Prussian military tradition. In the First World War, German soldiers continued this tradition when they marched into battle with the words 'God is with us' on their belt-buckles.<sup>50</sup> The Prussian perception of Paris as the new Babylon and the French as morally depraved stood in the same tradition. It was no coincidence that the clandestine Prussian resistance organization, to which many officers belonged, called itself the League of Virtue (*Tugendbund*). The same attitude can also be found in increased emphasis on the integrity of officers. Regimental courts of honour for disreputable behaviour were not only a reaction to the premature surrenders of 1806, but also an instrument for maintaining the moral purity of the officer corps.<sup>51</sup> The theme of the crusading spirit was relevant not only for religious but also for military considerations: an untainted officer was more likely to inspire his men and command their respect, both necessary demands if discipline was to be based increasingly on positive motivation.

The emphasis Prussian reformers placed on spiritual mobilization was reflected in the variety of proposals to this end. They suggested that the names of those fallen in action would be read out in church, distinguished soldiers and warrior widows would sit on the front benches, whereas cowards would be placed on the back benches. Their names and those of deserters would be announced from the pulpit as well. True to the reformers' crusading spirit, the church generally played an important role in contingency plans. Gneisenau's suggestion that clerics should supervise local administration in order to ensure devoted efforts for mobilization reminds one of the representatives on mission during the Wars of the French Revolution.

With regard to the political motivation of the population, Gneisenau went so far as to suggest that the king should promise his people a constitution. Another idea of his was to disband the regular army so that the population would not be able to rely on the professionals for their defence. He also suggested creating a new aristocracy based on conspicuous bravery similar to Napoleon's imperial service aristocracy. Aristocrats would lose their titles if they did not live up to expectations. It says a lot about Frederick William's tolerance that he did not cashier Gneisenau at once.<sup>52</sup>

The war expected by the reformers would be a war of national—and this includes dynastic—survival when the French would invade a weak Prussia with overwhelming force. Only total resistance by the whole nation, the reformers reckoned, would be able to halt this onslaught.<sup>53</sup> They were aware that total resistance, including the use of the *Landsturm*, following the Spanish example, could lead to savagery in warfare. This did not deter them. The example of Spain was quoted with approval. In this vein, the Prussian army trained for a less chivalrous way of warfare than hitherto practised. The instructions for marks-manship training, for instance, followed the French example by recommending to snipe at officers, a behaviour which would have been considered dishonourable in Frederick's time. The French revolutionary government's attitude of fighting domestic enemies with the same ruthlessness as foreign adversaries also found its parallel in the Prussian reforms. Prussian subjects who would not wholeheartedly fight for king and country would see their lack of loyalty severely punished. If the Polish nobility in the

Prussian provinces would not join the Prussian cause, Scharnhorst wrote, it would have to be destroyed in a war of annihilation (*Vernichtungskrieg*).<sup>54</sup>

The consequences of Napoleon's total victory in 1806 provoked Prussian determination for total resistance in the next war. This was a general problem with Napoleon's military successes: the more victories he won, the more opposition he provoked. He could beat his enemies with his operational art, but eventually they would return stronger than before. This was the case with Great Britain after 1808, with Austria in 1798, 1800, 1805 and 1809, with Russia in 1799, 1807, 1812 and 1813 and with Prussia in 1813. Napoleon's operational art had lifted military failure to a higher level. Whereas Frederick, in spite of his army's superiority in tactics, had been frustrated by campaigning conditions from winning the war, Napoleon was frustrated at the strategic level for all his superiority in operational art.<sup>55</sup>

Besides conscription, the reform of the officer corps, its selection and education, was the second cornerstone of military reform. Officer rank was now open to commoners. Selection of officers from the officer candidates as well as promotion in peace were largely dependent on military education and technical prowess. In war, bravery and competence would be the relevant criteria. The importance of seniority was discounted. Colonels were to be selected for merit only. Staff officers could reach general rank irrespective of length of service. The age hierarchy among generals was abolished.<sup>56</sup> As in the armies of the French Revolution, meritocracy would mobilize the nation's human resources by opening the way for talent and ambition. The expected increase in military skill and daring would result in enhanced tactical and operational prowess, both important for the creation of effective operational instruments. The introduction of meritocracy, like many other parts of the reform programme, had been prepared by the publications of Scharnhorst, Berenhorst and Valentini over many years.

Though the meritocratic principle was tampered with by giving captains the opportunity to select only noble officer candidates if they so wished, education had become a precondition for officer rank. Consequently, the standard of education in the officer corps rose even though the corps was still dominated by the aristocracy.<sup>57</sup>

Military schools were reformed. The *Kriegsschulen* in Berlin, Königsberg and Breslau trained officer candidates for the very competitive officer's examinations in a nine-month course. Emphasis was, as usual with Scharnhorst's institutions, on independent thinking rather than learning by heart. The higher classes of the *Kriegsschule* in Berlin offered engineering, artillery and prospective staff officers who had passed the entry exam a three-year course comprising French, mathematics, geometry, artillery science, tactics, strategy, geography, physics, chemistry, statistics, military history, engineering and a course on staff work. Officers of all arms were trained in artillery science in order to increase understanding for this arm and facilitate all-arms combat.<sup>58</sup>

Not only was theoretical officer training improved, care was taken to accustom the officer to independent command of mixed formations. La Roche-Aymon, like Scharnhorst, stressed the importance of officers learning to think independently, make quick decisions and cope with rapidly changing conditions. He suggested holding contested brigade manoeuvres and mock battles, conducting marches and building bivouacs under wartime conditions. La Roche-Aymon's proposals were turned into practice: mixed formations were ordered to rove the brigade district, march, bivouac and, following the French example, conduct *petite guerre* exercises against other mixed

formations. A number of officers could gain practical experience in independent command and all-arms combat in this way.<sup>59</sup>

It was hoped that, instead of the old, inflexible officers of 1806, younger, more dynamic and more independently thinking officers would lead troops on campaign and in battle. The end of seniority, the introduction of meritocracy and improved education transformed the officer corps in a way highly relevant to the successful execution of all-arms combat as well as operational art. Due to the higher general level of education, there would be no lack of prospective staff officers to furnish the divisional and corps staffs and the general staff. As in the case of conscription, the interplay between military and socio-political considerations, the meritocratic principle, fostered the creation of operational instruments.

An important aspect of the reform of the officer corps was the reform of the general staff. In war, the general staff was to consist of 14 general staff officers and 12 *adjoints*. Of these, four general staff officers would serve in general headquarters. One general staff officer would deal with marches, another would be responsible for maps and intelligence and a third for supply and transport. Corps staffs would have one general staff officer and one *adjoint*. The corps staff would have four departments. The first would be responsible for strategic and tactical orders and dispositions, military intelligence, security, maps and writing orders. The second department would be responsible for administration such as status lists, manpower and equipment status, food, fodder and fuel, personnel, promotion, discipline and punishments. The third department, under an intendant, a senior officer, would deal with matters of supply. The fourth department would be concerned with the artillery park and ammunition. The personnel and structure of the divisional staff resembled that of the corps staff.<sup>60</sup> Though the Prussian general staff of 1813 was not quite as complex an organization as its French counterpart of 1806, important elements such as the clear definition of responsibilities and the use of regular status reports had been introduced. This was a novelty compared to the Prussian general staff of 1806.

The training of staff officers closely followed Scharnhorst's practice of the pre-1806 period. Staff officer training was, in accordance with Scharnhorst's didactic principles, a balanced mix of theory and practice. In winter, theory, mainly military history, would be studied. During the other seasons, the officers would conduct tactical manoeuvres and reviews, survey terrain, stake bivouac sites, plan marches and trace fortifications. They would also travel through Prussia in order to gain first-hand knowledge of the whole Prussian and adjacent territory. During these staff rides, they were expected to study the military history of the region and retrace famous battles and campaigns.

In peacetime, general staff officers were either with the brigades, in the ministry of war, in troop command or on staff rides. In order to reduce personal friction and create a working relationship between general staff officers and commanders, general staff officers should already be dispatched to the corps in peacetimes. This was important since many generals were wary of general staff officers who seemed to undermine their authority. This problem had already been well known by Bourcet, whose academy for staff officers in Grenoble had been closed due to general officers' hostility.<sup>61</sup> In order to receive a well-rounded training, general staff officers frequently changed between staff duty and troop command. Ideally, a general staff officer would have served in all three arms.<sup>62</sup> There was a further difference to the general staff of 1806: whereas the old

general staff had been hampered in its effectiveness by three competing schools of thought, Scharnhorst's, Massenbach's and Pfull's, the new general staff would have one governing spirit, based on uniform training.

The nature of the general staff was most clearly expressed in Grolman's memorandum, which clearly showed the influence of Scharnhorst. Grolman considered the general staff a multi-functional organization. Not only was the general staff a command-and-control institution, it would also be a teaching institution to disseminate theoretical insights and practical experience throughout the army. To prevent the general staff from turning into an ivory tower, officers should not grow old in the general staff. Instead, a steady interchange between troop command and staff duty was desirable. Grolman's insistence on training as many officers as possible in the general staff reflected the need for highly trained officers for the successful execution of operational art. General staff officers dispatched to brigades and corps would, on the basis of their expert training and most recent insights, give competent advice to their commanders, who had not yet enjoyed general staff training.<sup>63</sup>

Following Grolman's design, the general staff was to take a key position in the Prussian army, whereas Napoleon's general staff was merely the master's tool. The Prussian general staff was to be the brains of the army. Napoleon's general staff was merely the nervous system, Napoleon himself being the brains. The Prussian general staff should create ideas, a notion already advocated by Bourcet, whereas the French general staff merely had to execute orders. Devolving responsibility to corps and army commanders would provide flexibility, whereas the role of the general staff officer was to ensure coordination by advising the commander on the basis of principles shared by all general staff officers. With increasing distances and army size, this system was more viable than Napoleon's system of centralized command and control. Napoleon's system of command and control was overstretched by 1813, whereas the Prussian system would still work well decades later. In the long run, the Prussian general staff was the better operational instrument.<sup>64</sup>

General advantages of a well-developed staff system were common to the French and the Prussians: army and corps commanders were able to leave most of the thinking and planning to their chiefs of staff, which permitted them to concentrate on the big picture and major decisions. In contrast to 1806, Prussian commanders would no longer waste time in occupying themselves with every detail. The corps system would also contribute to operational speed: as in the French army, general headquarters would have to give only brief directives to the corps, where the corps staffs would turn these into orders for their individual brigades. This system of decentralized command, particularly pronounced in the Prussian army, had the added advantage of operational flexibility, since the corps could better adapt to changing local conditions than more remote army headquarters.

The reform of the general staff showed the closeness between the ideas of Scharnhorst and Bourcet, particularly in the key role envisaged for the chief of staff and the emphasis on thorough training of general staff officers.<sup>65</sup> Scharnhorst's reason for choosing a dominant position for the chief of staff was largely the consequence of his theoretical insights and his personal experience from the Wars of the French Revolution and the Jena Campaign. His awareness, however, that he himself would serve in this position, probably reinforced his call for a powerful chief of staff. It would have been strange

indeed if Scharnhorst had allocated an inferior role such as Berthier's to his own prospective position.

In the context of civil reforms, ministries were created. One of those was the Ministry of War. This reform of military administration was not only a reaction to the failure of these institutions in 1806; Scharnhorst had called for years for a central administration capable of effectively mobilizing Prussia's resources. The new ministry, the *Kriegsdepartement*, was to consist of two departments, the General Military Office (*Allgemeines Kriegsdepartement*) and the Military-Economic Office (*Militär-Ökonomie Departement*). The *Allgemeines Kriegsdepartement* had three divisions. The first was for personnel, pensions, medals, rewards, discipline and justice, the second for conscription, military education, remounts, status reports, training, replacements, army mobilisation, supply, movements, maps, plans and archives and the third for artillery, engineers, fortresses and production of guns and powder. The Military-Economic Office had four divisions: for finances, supply, uniforms and pensions. Whereas Prussian military administration was centralized in one ministry, the French equivalents of the General Military Office and the Military-Economic Office had independent status. In this context, Prussia had gone farther in centralizing military administration than France.

Besides the *Kriegsdepartement*, there was the commissariat responsible for mobilization, trains and supply, which was expected to cooperate closely with the former. Each brigade would be allocated one commissary for matters of supply. Part of the drive towards improved army administration was the abolition of *Kompaniewirtschaft*, the inefficient, embezzlement-prone system by which captains were given a lump sum to equip their men. From now on, a paymaster regulated and supervised financial matters in the regiments.<sup>66</sup>

An important part of the *Kriegsdepartement's* work was planning for rapid mobilization. In 1806, the Prussian army had wasted eight weeks in mobilizing troops. In the next war with France, Prussia's fate would be decided within days since Prussia had lost all strategic depth and French garrisons controlled key fortresses on Prussian territory. With the new mobilization schedules, the planners were confident that infantry, cavalry and artillery could be mobilized within a mere 48 hours, whereas the trains would be ready after 14 days.<sup>67</sup> In 1813, the new Ministry of War would prove itself more capable than its precursors in 1806 to mobilize and arm several powerful corps.

Though a ministry of war now existed in all but the name, the king was loath to appoint a minister of war because he wished to preserve the traditionally close relationship between king and army. A minister of war would have constituted an intermediate institutional layer.<sup>68</sup> This distrust was not extended to the general staff. Whereas Napoleon, the usurper on a wobbly throne, could not afford to create a general staff which was a source of military genius independent of himself, because this would have made him replaceable, Frederick William, the legitimate ruler of Prussia, did not need to fear an independent and capable general staff. With regard to the general staff, the impact of political considerations on operational instruments favoured Prussia.

Scharnhorst and his circle had made great strides towards developing operational instruments, the corps system and the staff system. He had, however, failed to create a theory of operational art.<sup>69</sup> Whereas Bourcet and Guibert provided the theoretical basis of Napoleon's operational art, the Prussian reformers were less successful in operational theory. The most likely reason for this shortcoming is that the Prussian reformers, unlike

Guibert and Bourcet, had more pressing concerns and little time. The Prussians wanted to reform the army quickly and create trained reserves because they feared French invasion, resulting in the destruction of Prussia, at any time. Consequently, their minds were predominantly occupied with making the Prussian army battleworthy and with drafting contingency plans.<sup>70</sup>

Most contingency plans called for static defence in fortified camps and fortresses, supported by guerrilla warfare, the latter of which had already been advocated in Knesbeck's and Berenhorst's writings. These plans were for the defensive, rather than for offensive campaigning, the original context of operational art. Though Napoleon would demonstrate in 1814 how operational art could be used on the strategic defensive, the Prussians were not strong enough to take risks. Furthermore, the Prussians hoped that they could avoid the risk of operating against the French in the open field because they would merely have to gain time by fortress-based resistance and guerrilla warfare until other powers, Great Britain, Russia or Austria, came to Prussia's rescue.

If the Prussians had been content with merely planning for this static resistance, Prussian operational art would not have made much progress. Instead, the Prussians prepared their army for both short-term and long-term goals. The short-term goal was to enable the army to fight a strictly defensive kind of war. The long-term goal was to turn the Prussian army into a force capable of conducting and winning offensive campaigns. Since the Prussians were forced to pay much attention to the short-term goal, they did not have leisure to ponder over operational art. Nonetheless, two Prussians made tentative forays into the field of operational theory. Frederick William and the Prussian officer La Roche-Aymon put operational thoughts to paper which are reminiscent of Guibert's and Bourcet's theories. With slight exaggeration, La Roche-Aymon and the much-derided Frederick William may be called the Prussian equivalents of Guibert and Bourcet in terms of operational theory.<sup>71</sup>

Frederick William had realized that a Frederician-style army and conduct of war was no match for the modern French army and way of warfare. Therefore, he wanted to ensure that Napoleon would not enjoy the advantage furnished by a monopoly on operational instruments and operational art in the next war. He argued that the Prussian army could not hope to beat Napoleon with inferior forces by superior manoeuvring. Here Frederick William's frustration with the complicated plans of Massenbach and Brunswick and their sad results in the Jena Campaign became apparent. Napoleon was far too clever and his army too mobile to be defeated in this way. Instead, the Prussian army should rely on superior numbers. As long as quantitative superiority was not yet achieved, the Prussian army ought to avoid a major clash.

This observation shows that Frederick William had understood the importance of the concentrated use of a mass army. Once numerical superiority was achieved, Frederick William called for the annihilation of the enemy (*'vollends vernichten'*), an attitude reminiscent of Carnot and Napoleon, but also present in the earlier writings of Berenhorst and Scharnhorst. Frederick William's call for the light troops to operate far ahead, both to disrupt enemy communications and to gather intelligence, reflected the failure of Prussian reconnaissance in 1806. The core of his operational thinking, anticipated by Bülow, was the advance of army corps in several parallel columns. He reflected that an advance in this way would have turned the battle of Auerstädt into a Prussian victory.<sup>72</sup>



La Roche-Aymon, a Prussian officer of the wider reform circle, took operational thinking further. He had also realized that French military superiority not only rested on all-arms tactics but also on a higher operational rate of advance. He identified two causes for this speed: independence from rear supply and corps organization. He also rightly observed that the advance in several corps on parallel axes of advance would ensure surprise by confusing the enemy concerning one's intentions and point of maximum effort. This was an important observation which Bourcet and Guibert had made decades earlier.<sup>73</sup>

In spite of these operational insights, it seems that the direction of military reforms was not dictated by operational theory. The development of Prussian operational instruments and operational art was rather the accidental consequence of the Prussians trying to learn from Napoleon in tactical, organizational, operational and other aspects though without understanding the nature of his operational art as a whole.

Prussian tactical inferiority had been identified as one cause of Prussian defeat. All-arms combat was considered the key to improved tactical performance, which was not a new insight but had been preached by Scharnhorst for years. Tactical organization changed in the light of this emphasis on all-arms tactics. Originally, the reformers had intended to establish all-arms divisions combined in army corps of two divisions and a corps artillery reserve of one twelve-pounder battery of foot artillery and a further battery of horse artillery. Due to the troop limits set by the Convention of Paris, only six army brigades of two infantry regiments, twelve squadrons and, in war, one battery of foot and one of horse artillery, organized in three corps could be constituted.<sup>74</sup> The organization of the infantry regiment reflected the experiences at Jena and Auerstädt. Line infantry regiments now had two grenadier companies, two musketeer battalions of four companies each, and one light infantry battalion. This organization provided much better for cooperation between light and line infantry than the separate organization of line infantry regiments and independent light infantry battalions in 1806.

The standard battle formation of the all-arms brigade was as follows: the two light infantry battalions of the brigade would form a skirmisher screen, usually from one third of each company, the rest would stand in line close behind to serve as a rallying point in case of a cavalry charge. The light infantry could be closely supported by horse artillery and cavalry if necessary. The first line behind the skirmisher screen would be formed by three battalions in column. The second line would be formed by the grenadier battalion, the latter consisting of the grenadier companies of the brigade's two infantry regiments, and one infantry battalion. Cavalry would stand in column behind the second line. The foot battery of the brigade would initially be in the second line. If conditions permitted effective artillery fire, half a battery would be advanced to the left and the other half to the right of the first line. The horse artillery battery would stand between the cavalry columns as an artillery reserve. It was to be rapidly deployed on a spot where it could achieve surprise and maximum effect.

The brigade commander should conceal the strength of his brigade as much as possible, throwing forward into enemy sight only as many troops as necessary. Troops might also be protected from fire and sight by lying flat on the ground, a procedure unthinkable in Frederick's times. This ruse would permit the brigade commander to surprise the enemy by advancing with hitherto concealed columns of attack. Though the sequence of an ideal attack was not expressly described, it can be concluded that an

attack by column of battalions would have to be prepared by horse and foot artillery fire from close range, screened by skirmishers and covered from behind by cavalry, just like in the French army. This standard battle order was only a recommendation. Brigade commanders were repeatedly encouraged to adjust tactics to local conditions.<sup>75</sup> This emphasis on discretion tallied with Frederick William's demand to decentralize tactical command in order to gain tactical flexibility.

Though only the light battalion, the third rank of the two musketeer battalions and the grenadier companies were thoroughly trained in skirmishing, the infantryman's training had to be universal so that each man would be able to fight in line or open order according to conditions. Bülow and Prince August had already called for the universal infantryman before 1806. Realizing that open-order combat called for intelligent, motivated soldiers with initiative and a basic sense for tactics, much attention was devoted to the training of skirmishers.<sup>76</sup>

In consequence of tactical reforms, more than one third of the Prussian infantry was expected to fight in open order, in which traditional means of motivation and discipline by close supervision were no longer applicable. Here, non-military and military considerations converged: the political necessity for replacing discipline based on coercion by discipline based on positive motivation was reinforced by demands which had been made by military theorists such as Scharnhorst, Berenhorst, Bülow, Valentini, Knesebeck and Beulwitz for years.<sup>77</sup>

The light infantry now received, for the first time, regulations which were suited for this arm.<sup>78</sup> Regulations for the training of light infantry and the third rank were particularly detailed and progressive. Again, following the French example at Jena, the regulations suggested bringing artillery forward into the skirmisher line in order to fire canister from close range. The provision that attacks on enemy fortifications should be carried out by the third rank approaching carefully under cover to snipe at gun crews was probably a direct result of Scharnhorst's personal experience during the defence of Menin in 1793. In order to furnish musketeer officers with the necessary knowledge for skirmishing, they would serve a short apprenticeship with the regiment's light battalion. In line with emphasis on marksmanship, an improved musket was introduced to facilitate aimed shooting.

Not only did the new tactical doctrine embrace combined arms combat in principle, highly realistic exercises on all levels were conducted to ensure that troops and commanders would be familiar with this new kind of combat. Training in skirmishing, marksmanship, fieldcraft and reconnaissance, which had hardly been practised at all before the reforms, was given much time and attention. La Roche-Aymon's manual for light troops, for instance, apart from discussing light infantry and cavalry tactics, emphasized the importance of proper reconnaissance and reports, both areas of deficiency which had contributed to the Prussian defeat at Jena.<sup>79</sup>

The army received a new drill manual which was pruned of everything superfluous, again a long-standing demand of theorists such as Berenhorst and Bülow. The times of mere showmanship were over. Regimental and brigade exercises were also pruned of unrealistic and useless items. The infantry regulations explicitly stated that nothing should be practised that would be too complicated to be used against a real enemy.<sup>80</sup> Tactical formations, such as the solid square, copied from the Austrian army, reflected this emphasis on simplicity and practicability. There were good reasons for simple

tactics: non-military limitations such as lack of cash and the military stipulations of the peace treaty forbade conscription in times of peace. These restrictions, as well as the fact that many regular soldiers had to be sent on furlough for financial reasons, forced the army to develop a set of simple tactical movements which could rapidly be learned by conscripts at the outbreak of war and which would easily be refreshed by soldiers on furlough.

Quick learning of tactics at the outbreak of war was important since the shallowness of Prussian territory would not permit much time for training before the approach of the invader. Simple tactics would render the conscript army battleworthy within a short time. This consideration had also played a role in revolutionary France when the untrained masses of French volunteers and conscripts relied heavily on columns of attack and clouds of skirmishers to become militarily useful within a short time. A *Normalbataillon* and a *Normalescadron* served as model units for training drill instructors of individual regiments in order to ensure the dissemination of the new drill to the whole army.<sup>81</sup>

Tactical reforms demonstrated that the lessons of 1806 had been learned, even though reformed tactics were not yet as effective as Napoleon's. Prussian brigade-tactics were predominantly attrition-based rather than aiming for a crushing blow. Though columns of attack were envisaged, the French-style massive use of columns of attack was not an explicit part of Prussian tactical thinking.

The role of the cavalry was too passive. Though corps had a corps cavalry reserve, cavalry became a handmaiden of the infantry, mainly concerned with protecting the infantry from enemy cavalry instead of playing a more independent and decisive role. As in 1806, Prussian all-arms brigades dispersed much of the cavalry. A massive cavalry charge to effect a breakthrough was difficult under these conditions. It is astonishing that Scharnhorst repeated this mistake which he had criticized prior to the Jena campaign.<sup>82</sup>

Artillery regulations described the use of single batteries, but they said very little about grand batteries and their role. This important aspect of French tactics, the use of a grand battery in preparation for a concentrated infantry attack, had either been overlooked or it was simply not part of brigade-level regulations. The fact that Prussian corps were meant to have an artillery reserve suggests the latter interpretation.<sup>83</sup>

For all their minor weaknesses, tactical reforms rendered the Prussian army, like the French army, capable of fighting in all kinds of terrain which it would prove in the *Großer Garten* at Dresden, in the mountains of Kulm, in the villages around Leipzig, in the forests of Weissig, Königswartha, Großbeeren and Dennewitz and elsewhere in 1813. If the Prussian army had had this kind of tactical flexibility in 1806, at least the battle of Auerstädt might have taken a different turn.

The importance of Prussian tactics for operational art rested on an ability to deliver decisive results at the tactical level in whatever kind of terrain the enemy happened to be encountered. If tactics had not improved in line with operational art, by relying on combined-arms combat and the tactical advantages bestowed by the corps system, favourable conditions for battle provided by operational art would have been wasted.

Obvious weaknesses of the Prussian system of supply and transport prompted a reform of the train service as well. Here, again, a familiar theme discussed by Berenhorst, Scharnhorst and Guibert was taken up. Though the system of magazine supply which had hamstrung army command and left soldiers hungry in 1806 was not discarded, it was at least improved. Instead of having long supply columns shuttling between army and

depots, each brigade should have a train of 32 waggons carrying bread for four days and a train of 34 waggons to carry flour for another four days, still far more vehicles than the *Grande Armée* had in 1806. The bakery train was reduced in the hope that use could be made of civilian ovens in the theatre. To ease the problem of ammunition supply and reduce the number of ammunition vehicles, the new musket had circumspectly been designed to fire French, Austrian and Russian ammunition.

Efforts were made to shorten the baggage train: each company would have only one pack horse for officer baggage. Each battalion would have three waggons for baggage, uniforms, shoes and ammunition. Subalterns lost their riding horses. The substitution of tents by coats also contributed to the reduction of baggage. Compared to 1806, the number of horses and amount of baggage had been significantly curtailed.<sup>84</sup> Though, in theory, the Prussian system of supply still depended much on rear supply, in practice, supply arrangements would provide for operational flexibility.

### Summary

The interplay of non-military and military developments in the evolution of operational art can clearly be perceived in the Prussian reforms. Military defeat had prompted thorough social and political reforms, which, in a mutually reinforcing relationship with military reforms, created Prussia's operational instruments as well as a well-trained and dynamic officer corps.

Whereas the French monarchy had reformed the army but failed in political and social reforms, a failure which was rectified by the Revolution, Prussian reformers succeeded in both areas sufficiently to create the necessary conditions for the creation of operational instruments without falling victim to revolution. Though Prussian mobilization and reform efforts were limited by occupation, poverty and opposition, attempts were made to harness nationalism as well as human resources for military purposes.

Not only did Prussia pull even with France in matters of operational instruments, supply organization and tactics, Prussia's general staff organization proved to be even better than the French in the long run. The reform period also saw the birth of Prussian operational theory. In this context, Frederick William and La Roche-Aymon, both reflecting on the causes of Prussian defeat, were the Prussian counterparts to Guibert and Bourcet. The interplay between military theory and practice can also be seen in Scharnhorst's case. Like Guibert, this military theorist had the opportunity to turn his theories, themselves based on recent experience, into practical reforms.

## 5

# CAMPAIGNS OF 1813

This chapter will compare the quality of French and the recently forged Prussian operational instruments in 1813 as well as French and Prussian operational art. It will be shown how Prussian military reforms had contributed to creating a symmetrical balance at the operational as well as the tactical levels, which resulted in the return of victory by attrition.

### **The strategic level**

Having lost the *Grande Armée* in Russia and being pursued by the victorious Russians, soon to be supported by the Prussians, Napoleon's war aim in spring 1813 was to defend as much of his empire as possible. Considerations of a more offensive kind, such as the desire to punish Prussia for her change of fronts, also played a role.

In 1806, at the height of his power, Napoleon had been forced by the domestic imperative to deliver rapid and inexpensive victory. Now, with his popular support in France considerably undermined by the disaster of the Russian campaign, Napoleon had to rely on operational art to deliver rapid victory more than ever. Indicative of Napoleon's sense of insecurity was the formation of the Guards of Honour (*gardes d'honneur à cheval*), young men from the best families of France who armed and mounted themselves to serve the emperor. These Guards, unlike their Prussian equivalent, the volunteer *Jäger*, were to serve the regime as hostages to ensure the good conduct of their families.<sup>1</sup>

Not only had the emperor to win a victory soon in order to bolster his rapidly eroding support at home, an imperial imperative, the necessity to win in order to keep the satellites of the empire, primarily the members of the Confederation of the Rhine, in the fold, added to the urgency of victory. In the course of the spring and autumn campaigns it became obvious that this threat was very real. The Confederation members' loyalty directly depended on Napoleon's military success. Prussian and Russian diplomacy exacerbated the problem by threatening the sovereigns of the Confederation with the loss of crown and country if they did not join the allies.<sup>2</sup>

Victory in battle was also important in order to impress Austria and other neutrals such as Denmark and Sweden. If Napoleon's operational art permitted him to beat the

Russo-Prussian forces early in the campaign, Austria might decide to join Napoleon, or, at least, to remain on the sidelines.

In 1806, Napoleon had succeeded in isolating Prussia. In 1813, in contrast, his efforts to play off one alliance partner against the other were futile partly due to allied hostility and partly due to his unwillingness to compromise. He was not prepared to accept a negotiated peace with the allies, which would cost him part of his earlier conquests.<sup>3</sup> This policy rendered a diplomatic solution very difficult and increased the pressure to win decisively by use of operational art in order to dictate peace terms to the vanquished allies, as he had done to Prussia in 1806.

Not only did Napoleon fail in diplomacy, but he also committed mistakes in the strategic deployment of French forces. Already numerically inferior to the combined might of Austria, Russia, Prussia and Sweden, Napoleon tilted the balance of forces further to the allied side by leaving a strong and experienced army for the defence of his Spanish conquest. In 1806, Napoleon's strategic economy of force had provided him with superior forces in the theatre of operations. In autumn 1813, the allies enjoyed superiority of numbers in the crucial theatre. A timely retreat behind the Pyrenees might have economized manpower, permitting him to dispatch part of the French Peninsular army to the German theatre. Furthermore, considerable parts of the *Grande Armée* had been left stranded in fortresses east of the Elbe during the retreat from Russia. These forces, now besieged and beyond French relief, were veterans of the invasion army of 1812, precious, experienced manpower.<sup>4</sup>

Whereas Napoleon had created most favourable conditions for operational art to deliver rapid and total victory in 1806, conditions were less favourable in spring 1813 and even worse in autumn. This time, a severely weakened French empire fought against an alliance rather than an isolated enemy. This time, the enemy could not be confused by diplomatic manoeuvres. Consequently, Napoleon could not use the same plots as in 1806 to secure the strategic initiative for himself. This time, France's satellites threatened to become a strategic liability due to their suspect loyalty, rather than being a chief source of strength.

Whereas Napoleon demonstrated his usual sense of purpose, the Prussian king was as prevaricating as ever. Though Prussian reforms had created ministries with clear responsibilities, headed by accountable ministers, the king had not completely jettisoned his coterie of personal advisers, among them *Generaladjutant* Knesebeck who was particularly influential in strategic as well as operational matters.<sup>5</sup> Continued reliance on advisers, some of whom called for war against the former ally, some of whom preferred to remain true to the alliance or at least neutral, prolonged the hesitation of the king.<sup>6</sup>

Since the king was unwilling to go to war on his own initiative, Francophobes such as General Yorck and the former Prussian minister Stein felt compelled to *create faits accomplis*. Yorck's convention of Taugoggen declared the Prussian contingent, still nominally an ancillary part of the *Grande Armée*, neutral.<sup>7</sup> This act constituted a breach of the alliance with France and pushed the king towards an alliance with Russia. Stein, now in Russian service, compelled Frederick William further into war by inducing the East Prussian estates to begin mobilization on their own account.<sup>8</sup> Due to the unauthorized measures taken by Yorck and the East Prussian estates, Frederick William had to accept that war with France was unavoidable.

In spring 1813, Prussia had to fight for her survival with even more urgency than Frederick the Great had done. If Napoleon had reoccupied Prussia in 1813, there is little doubt that the Hohenzollern state would have disappeared from the map. Frederick William, however, did not understand the urgency of the situation. As in 1806, he probably hoped that a peaceful solution might still be found. Instead of mobilizing Prussia's human and material resources to the utmost, as revolutionary France had done in 1792/1793, he frustrated Scharnhorst by delaying mobilization.

During the armistice and the autumn campaign of 1813, Frederick William had realized that prospects for winning the war were good. Though Prussia's territorial integrity was still at risk, aims going beyond the survival of Prussia began to emerge. Naturally, restoring the pre-Tilsit Prussian borders was the foremost war aim. Yet, Prussian ambitions went further, considering that the anticipated political and territorial reorganization of Germany after the victory over Napoleon offered prospects for Prussian expansion.

The other members of the alliance had their own war aims. Alexander was also distrustful of Prussia, being aware that Prussian diplomats had played a devious game in 1811/1812.<sup>9</sup> His intention was to expand Russian influence westwards. Austria feared strong Prussian and Russian neighbours and would rather have preferred to keep a powerful France as a counterweight to these rivals. Crown Prince Bernadotte of Sweden wished to expand Sweden's territory and, in the long run, to become king of France. Far from presenting a united front against Napoleon, the allies squabbled among themselves, distrusting each other's intentions regarding the post-war order of Europe.<sup>10</sup>

The practice of forming combined armies of Prussian, Russian, Austrian, Swedish and British troops rather than purely national field armies was a symptom of this distrust. The presence of allied troops and generals made it harder for the individual army commander to follow national interests to the detriment of the allies. This arrangement proved to be particularly necessary in the case of Bernadotte's Army of the North.

Luckily for the allies, Napoleon's uncompromising attitude, combined with allied distrust towards his diplomacy, held this alliance together until they entered Paris in 1814. Being a member of an alliance, Prussia had to ensure that her interests were not ignored. Full mobilization served this purpose since a powerful Prussian army was the best guarantee for Prussia's status as one among equals in the alliance.<sup>11</sup>

During the Spring Campaign, Russo-Prussian strategy was severely hampered by the exhausted state of the Russian army, which had suffered severely during the pursuit of the *Grande Armée* in winter 1812/1813, as well as by the weakness of the diminutive Prussian army which was only now mobilizing. The Russians, Kutusov in particular, were fully aware of their weakness and wished to rest and recuperate, whereas the Prussians called for an aggressive advance.<sup>12</sup> The compromise strategy was to use the numerous allied cavalry in order to raid enemy territory and kindle insurrections, while the feeble armies would slowly follow.

When Napoleon advanced across the Saale in late April, the allies sensed an opportunity to beat the French columns one by one, a success which might impress hesitant neutrals such as Austria and Sweden. When the subsequent battle of Lützen ended in defeat, the allies decided to offer one more battle at Bautzen in order to demonstrate to potential allies as well as to the Prussian army and population that Russia and Prussia were determined to continue fighting even after the setback at Lützen.<sup>13</sup> This

combination of strategy and diplomacy, aided by Wellington's victory at Vittoria, finally induced Austria to join the alliance. This time, unlike 1806, Prussian diplomacy and military strategy were integrated.

Whereas Napoleon consistently aimed for the rapid destruction of the enemy army in battle by the application of operational art, battle did not play a pivotal role in allied strategy. In spring, the allies fought battles only for diplomatic ends. In autumn, the allies adopted an attritional strategy which avoided battle until allied numerical superiority had become overwhelming.

Frederick William's early hesitation apart, Prussia conducted war in a much more determined manner than in 1806. Not only were national resources fully mobilized, energetic efforts were made to win allies, and a battle of annihilation attempted, attitudes had become more ruthless. Whereas, in 1806, the Prussian army had hampered itself by exaggerated respect for private property, the allies did not hesitate to adopt a scorched earth policy during their retreat from Lützen to Bautzen in 1813.<sup>14</sup> The Prussians had also learned the lesson of 1806 not to waste first-line forces for secondary tasks. Consequently, the defence of Berlin and the blockading of French-held fortresses was left to second-line forces such as the *Landwehr* and recruits undergoing training.<sup>15</sup>

Napoleon still enjoyed the advantage of universal military and political control, which permitted him to mobilize sufficient manpower and resources to replace the *Grande Armée* which he had lost in the steppes of Russia. Though his uncompromising policy demanded a total mobilization effort if the hostile alliance was to be beaten, mobilization was limited for domestic reasons. As a consequence of the Russian disaster, Napoleon's support in France had crumbled. To attempt a *levée en masse* in this political climate would have been highly dangerous for his political power, as increasing resistance against the draft clearly demonstrated.<sup>16</sup> Consequently, he mobilized only part of the available manpower. As late as September 1813, Napoleon calculated that he still had a reserve of 900,000 men not yet called up.<sup>17</sup>

Nonetheless, the mobilization effort was impressive. Between September 1812 and April 1813, about 600,000 men were called up. Until November 1813, the number had risen to 1,327,000 men—in theory. The effective strength of the *Grande Armée* in Germany, however, amounted to merely 300,000 in April and 400,000 in August 1813.<sup>18</sup> Fear of discontent also induced Napoleon to limit the mobilization of war material in order to avoid a rise in taxes.<sup>19</sup>

As in 1806, Napoleon tried to pass much of the costs of mobilization on to the Confederation. Yet, for all the pressure exerted by the emperor, the contribution of the Confederation was limited.<sup>20</sup> On the one hand, troops lost in Russia could hardly be replaced at short notice. Those Confederation troops which took to the field were prone to change sides at the first opportunity. On the other hand, the allegiance of the princes, who had already sacrificed so many lives and riches to Napoleon and saw themselves now threatened with losing their thrones in the more and more likely event of an allied victory, was becoming increasingly doubtful. Furthermore, allied raiding corps sparked local insurrections and seized money, supplies and war material destined for the French army.<sup>21</sup> Though the Confederation had become a liability, Napoleon would not give up any of the territory conquered, neither in Spain nor in Germany.

Apart from mobilizing large numbers of men, Napoleon took care to exploit France's human resources as he had done in 1806. Losses of experienced officers in the Russian



campaign had been so heavy that the French officer corps of 1813 cannot have been much more competent than that of 1793. French officers in 1806 had been experienced, thoroughly professional and driven by the meritocratic principle. This had been the dynamic officer corps necessary for the conduct of operational art and combined arms tactics. The officer corps of 1813 could not live up to this standard of performance. Napoleon was so desperate that he chided his minister of war for appointing the worst possible individuals.<sup>22</sup> Poor officers caused poor discipline, which, in turn, resulted in low marching performance, a high rate of desertion and limited tactical efficiency. The lack of experienced staff officers, in particular, did much harm to the efficiency of French operational instruments.

The morale of Napoleon's army had also suffered.<sup>23</sup> Though the conscripts of 1813 were surprisingly brave in battle, taking into account the tidings of the Russian campaign and the growing disgust with Napoleon's endless wars, the rate of desertion was no longer matched by new levies. During the pursuit of the allies after Lützen, Napoleon lost 42,000 by desertion in 10 days.<sup>24</sup> Consequently, the balance of numbers tilted more and more to the allied side.

In 1806, French troops had been sufficiently motivated to rejoin the colours when they had foraged on their own or fallen behind on forced marches. In 1813, when losses in combat increased, the spoils of war became scarce and hunger was commonplace, incentives were no longer strong enough.

The degree of Prussian mobilization in 1813 was astonishing taking into account that Prussia was impoverished and had only half the territory and population of 1806. Nonetheless, 277,900 men had been mobilized by August 1813, in relative terms more than twice as many as in 1806. Thanks, in part, to Prussia's manpower mobilization, the allies could field about 500,000 men in August compared to Napoleon's 400,000.<sup>25</sup> Once Frederick William had been convinced of the need to mobilize, the political will which had so conspicuously lacked in 1806 was there. Reforms of Prussian administration demonstrated their beneficial effects in translating this will into action. Not only were Prussian resources used to a far higher degree than in 1806, the Prussian administration quickly harnessed the resources of liberated territory as well.

Yet, for all the impressive performance of Prussian mobilization, there were still limitations. The first was the procrastination of Frederick William who wasted time when there was no time to lose. As a consequence of his timidity, the Prussian army was 20,000–30,000 men weaker in the Spring Campaign than it could have been.<sup>26</sup> Another limitation was caused by the presence of French troops on Prussian territory. Manpower and resources could only be levied in the territory under effective Prussian control, which was initially limited to East Prussia and Silesia. Prussian mobilization plans prepared before 1813 were only partly applicable because the progress of mobilization was tied to the progress of Russo-Prussian forces. Consequently, mobilization was not only delayed but also chaotic for all the meticulous preparation during the reform era.<sup>27</sup> The Prussian government quickly reacted to these unforeseen circumstances by establishing four military provinces, each headed by a civilian and a military governor. This arrangement proved useful as one province after the other was liberated.<sup>28</sup>

Furthermore, for all of Scharnhorst's efforts to build a large reserve of arms and the requisitioning of craftsmen to produce more weapons and equipment in public workshops, the *Landwehr* could not be fully armed and equipped. The third rank of the

*Landwehr* infantry had to be armed with pikes, the same stopgap measure used by revolutionary France.<sup>29</sup>

In contrast to 1806, the importance of human resources had not been over-looked. The meritocratic principle had opened the officer corps for talent. Though this removal of restrictions had not caused a flood of aspiring middle-class officers, it had introduced the element of competition. Only when the volunteer *Jäger* began to provide numerous officers in the course of the campaign did a large influx of middle-class intelligence take place.

The Prussian officer corps of 1813 compared rather well with its predecessor of 1806. Whereas the Prussian officer corps of Jena had been rigid and unimaginative, the new officer corps was as flexible and dynamic as was necessary for the successful conduct of operational art and combined arms tactics. Though a large part of the 1806 officer corps was still serving, 4,000 out of the 7,000 officers of 1806, it had been cleansed of its oldest and least capable members. Furthermore, officers who had taken part in the Jena Campaign had a particular incentive to clear the slate.

The strength of the French officer corps of 1806 had rested on meritocracy and experience. The strength of the Prussian officer corps of 1813 rested on meritocracy and education, which was the next best thing to experience. Prussian officers, however, were no unworldly scholars. Realistic training as well as the recent war experience of 1812 had prepared officers well for what lay ahead.<sup>30</sup> Yet, for all the efforts of the reformers, the officer corps was not thoroughly professional because the surge in Prussian army manpower overstretched its cadres. Consequently, former officers and even civilians had to be commissioned quickly in order to command the *Landwehr*. Though the officers from civilian life were not considered equal by their professional comrades, they seemed to have learned their trade quickly enough, probably aided by the simplification of drill manuals during the reforms.<sup>31</sup>

Spiritual mobilization played a considerable role in 1813. Though, at first, Frederick William had as little understanding for playing the patriotic tune as in 1806, the flame of spontaneous nationalism was fanned by members of the intellectual *élite* such as Arndt and Fichte. Enthusiasm in academic circles was widespread. The professors of Berlin's university drilled on the campus, and a professor in Halle volunteered at the head of his students. The proclamation of Frederick William united king and nation in spirit.<sup>32</sup> Without this patriotic spirit, Prussian mobilization would have been hardly possible. Though historians have questioned the willingness of Prussian subjects to fight,<sup>33</sup> it cannot be denied that they were willing to pay and work for the war effort. Ladies surrendered their jewels, private persons sent cash, women produced uniforms, peasants offered horses and harnesses and the East Prussian estates raised cavalry regiments at their own cost—a scene reminiscent of the *levée en masse*.<sup>34</sup>

The contribution of the population did not stop with material aspects. Those classes exempt from military service before the reform era joined the *Landwehr* and the *Jäger* detachments in accordance with the new service laws. Though draft evasion, particularly in the eastern provinces, was no rarity, the rapid mobilization of the Silesian *Landwehr* in particular demonstrated that the reformers' attempts to create a bond between army and nation had not been in vain. Decken's aim of strengthening the bond between army and nation without weakening the bond between army and king had largely been achieved.

The operational consequences of the nation's willingness to take part in the war effort were twofold. On the one hand, contributions permitted arming and equipping an army numerous enough to form several corps. On the other hand, the *Landwehr*, though not battleworthy at first, could take over secondary tasks such as the security of Berlin and the blockading of French garrisons. This left the regular army free to operate in the field. In this context, the *Landsturm* should have played a supporting role as well, freeing *Landwehr* units to join the army in the field. In the event, however, socially and politically motivated opposition against the *Landsturm* choked this concept in the cradle, though there were occasions in which the Prussian population took up arms.<sup>35</sup>

Having succeeded in its own country, the Prussian government tried to use the appeal of nationalism on a larger scale by 'exporting' it into the Confederation of the Rhine. Raiding corps penetrated French-occupied territory in order to encourage insurrections. Some raids such as the capture of Kassel, the capital of Westphalia, were undertaken for their propagandist effect. Though the German population did occasionally rise, most notably at Lüneburg where raiders and townspeople defeated a regular French division, fear of French reprisals, possibly combined with anti-Prussian sentiments, discouraged most Germans. Notably successful were efforts to induce Confederation troops to desert or change sides. These subversive activities in the French hinterland forced Napoleon to divert troops from the field army for policing and territorial control.<sup>36</sup>

Morale in the Prussian forces was generally high. Regulars could not be daunted by defeats such as Lützen and Bautzen. Resilient like the Prussians of 1759 and 1806, they soldiered on. Victories such as the Katzbach, Großbeeren, Dennewitz and Hagenberg were important for boosting the morale of the initially unsteady *Landwehr*. Once the *Landwehr* had passed their baptism of fire, desertion and low morale, which had been frequent in the first weeks of the campaign, declined.<sup>37</sup>

Some novel elements of motivation helped to sustain morale. One element was the fact that all strata of society were now contributing to the casualty list. Not only the cantonists, but also the middle classes serving in the volunteer *Jäger*, and the formerly exempt classes serving in the *Landwehr* were now fighting and dying side by side with cantonists. Also, the career prospects of the common soldier had improved with the new emphasis on merit. Another leveller of rank was the Iron Cross, a prestigious decoration which could be earned by all ranks.<sup>38</sup>

Unlike 1806, nationalism, universal service and meritocracy mobilized Prussia's resources in manpower, material, spirit and talent to a degree at least comparable to revolutionary France in 1792/1793. The consequence of a mobilization on that scale was the creation of self-regenerating allied mass armies, which could not be outmanoeuvred and destroyed in a single battle like the Prussian army in 1806. Instead, the campaigns of 1813 saw a number of large battles between forces organized in a similar way. In this stalemate, victory would eventually belong to the side with superior resources. The comparatively greater success of allied mobilization increased the pressure on Napoleon to rely on operational art in order to achieve a rapid conclusion, whereas the allies could rely on time and numbers.

### The operational level

Though the French corps system offered the same operational advantages as in 1806, its utility had declined for two reasons.<sup>39</sup> First, the quality of French corps as operational instruments had declined. Second, the Prussians and their allies had copied the corps system, which made it much harder to outmanoeuvre the enemy in order to destroy him in decisive battle. Whereas a unitary army could easily be caught in the net of corps advancing on a broad front, an enemy army operating with corps as well was much harder to trap.

Particularly serious was the decline in operational speed. Whereas French corps had moved more rapidly than the enemy in 1806, by 1813 the composition of the army corps made a comparable speed difficult to achieve. The French army now consisted of recruits, weak due to their youth and not yet accustomed to the hardships of campaigning. They fell by the wayside in their thousands, forcing the corps commanders either to forgo forced marches or to arrive on the battlefield with much depleted numbers. Some recruit battalions had lost a third or half of their complement even before they had crossed the Rhine. Poor discipline, due to the lack of officers capable of maintaining march discipline, frequent intermingling of columns and an increased number of guns caused delays and confusion. Only few marches such as the 144-km march of the Guard to Dresden in three days, or Marmont and Victor's 192-km march in four days reminded one of the *Grande Armée* of 1806.<sup>40</sup> Consequently, marches had to be kept short with the result that the enemy could no longer be outmarched either in manoeuvre or in pursuit.<sup>41</sup> This slowness of French corps was a necessary precondition for the allied Trachenberg Plan to work.

Whereas French corps had lost their edge, Prussian military organization had considerably improved following the experiences of 1806. Instead of the all-arms divisions of 1806, army corps had been created, providing Prussian commanders with all the operational advantages of this form of organization. Prussian corps organization was similar to the French apart from the superior number of cavalry in Prussian corps.<sup>42</sup>

Purely military considerations apart, political conditions also suggested adopting corps. Since allied forces were organized in self-contained corps, these could easily be combined in multi-national armies. Because corps were operationally semi-independent and tactically independent formations, the corps commander had more control of his nation's contingent and therefore more opportunities to act in accordance with his sovereign's interest, than in the case of the obsolete form of organization in which divisions, brigades or battalions were the largest building blocks of the army. Only corps organization permitted Bülow, assisted by Borstell and Tauentzien, to fight the battles of Großbeeren and Dennewitz in defence of Prussian interests without support from his lethargic army commander, Bernadotte. Corps organization, in other words, may at least partly have been an expression of inter-allied distrust.

The French staff system had deteriorated in line with the corps system. Only a small number of experienced staff officers were available at divisional, corps and army level. Vandamme did not have a single general staff officer in April 1813.<sup>43</sup> The full operational potential of the corps could only be exploited by their smooth and competent handling, which had been so well coordinated by the French staff system in 1806. Now, the quantitative and qualitative weakness of the staffs further reduced the corps' operational flexibility. Poor coordination and bungling became more frequent. Macdonald, for

instance, might have retreated more easily across the Katzbach, if poor staff work would not have resulted in chaos and mixing of marching columns.<sup>44</sup>

Apart from the staff system, French operational command and control had deteriorated in other respects as well. Whereas Napoleon had successfully controlled the *Grande Armée* during the campaign of 1806, the expanded size of the theatre of operations and the need to fight several enemy armies at once no longer permitted him to centralize operational control in his own hands. Instead, he felt compelled to form secondary armies of several corps each, commanded by marshals.

Even if Napoleon would not have had to deal with several enemies, it would not have been advisable to concentrate all his field forces in one army. Armies had grown so huge by 1813 that they could hardly operate as one field army in the way the *Grande Armée* of 1806 had done. If Napoleon had attempted to form one field army of 300,000–400,000 men, the flank corps would have been so far from army headquarters that the two-way communication of reports and orders would have taken several days. Thus, distances between army headquarters and flank corps would have slowed down the operational speed of the whole army. In other words, manoeuvring with a 300,000–400,000-men army on a broad front would have overtaxed operational command and control capabilities of that time. A theoretically possible solution, to operate with this huge army on a smaller frontage by reducing the distances between the corps, was not feasible because each corps needed a broad swathe of country in order to draw on its resources. As a result, Napoleon did not have much choice than keeping the army under his direct control of manageable proportions and distributing the balance of forces on secondary armies. The allies were forced to do the same by operating in three widely distributed armies for most of the time.

Though Napoleon's capability to exert operational command and control of the army directly under his control was undiminished, his marshals, like many of Frederick's generals, were far less competent in the role of army commanders.<sup>45</sup> Probably due to political considerations, Napoleon had failed to train his marshals in his operational art. Now, when he had to entrust operational command and control to Oudinot, Ney and Macdonald, it became apparent that these marshals could be entrusted with the command of a corps under Napoleon's supervision and guidance, but hardly with independent army command. Napoleon exacerbated the problem by wasting the talents of his most gifted marshal, Davout, in a sideshow in Hamburg instead of entrusting an army command to him.

The long-standing competition among the marshals, though advantageous to Napoleon's political power, became harmful as soon as one of them received army command, since jealousy and rivalry made it very difficult for the commander of a secondary army to enforce the obedience of marshals subordinate to him.<sup>46</sup> Furthermore, as Bernadotte's behaviour in 1806 had already demonstrated, marshals were not above treachery in order to see the downfall of a rival. Oudinot, for instance, obeyed the letter of the last order received by Ney before the battle of Dennewitz in the full knowledge that the sense of the order had been overturned by changing conditions. He achieved his purpose: Ney, his rival, was beaten, and Oudinot could justify his conduct on the basis of Ney's orders.<sup>47</sup>

The degree of operational independence granted to secondary army commanders by Napoleon was considerable. Though Napoleon prodded his subordinates into action, he

willingly shared operational intelligence as well as his plans with them.<sup>48</sup> Part of the reason for leaving so much to the discretion of his marshals was the activity of allied raiders whose presence in the French hinterland slowed down the flow of correspondence between Napoleon and his secondary army commanders. Occasionally, orders had to be carried by infantry companies rather than *aide-de-camps* on fast horses.<sup>49</sup> If correspondence between army headquarters had been faster and more regular, permitting closer operational control, Napoleon might have prevented blunders, such as Macdonald's advance across the Katzbach or the bungled pursuit of the allies after Dresden, by timely intervention.

Another consequence of insecure communications between corps and army headquarters was an increasing need for direct cooperation between adjacent corps, which worked well if the corps commanders were prepared to cooperate. If marshals wished to see a rival beaten, however, denying inter-corps cooperation was an obvious option.<sup>50</sup> In sum, in contrast to 1806, French operational command and control had become inefficient due to adverse conditions, incompetence and lack of good will.

Not only the Prussian corps system, but also the means to command and control it had improved with the reform of the Prussian staff system. Prussian staff officers were now comprehensively trained and distributed at the brigade, corps and army levels.<sup>51</sup> Staff procedures had been streamlined in order to achieve a higher degree of efficiency and operational speed. Prussian command and control organization and procedures no longer slowed down the army's operational speed as in 1806. In Prussian headquarters, orders were now given during the night so that they could be carried out early in the morning. Furthermore, orders were now received by *aide-de-camps* or staff officers rather than subordinate commanders in person, a new procedure which saved much time. Frederick William's decree on staff organization, routine procedures and principles of staff work resembled the French staff practice of 1806.<sup>52</sup>

Important staff routines such as regular status reports had been introduced. In contrast to 1806, full use was made of the chain of command. Army commanders, or their chiefs of staff, had copied the French practice of giving short directives to their subordinate corps commanders, who, in turn, gave brief orders to their brigade commanders, leaving details on the use and movement of individual battalions and squadrons to them.

Particularly important was the twin leadership provided by a strong chief of staff and the army commander, the success model in Prussian military history ever since. Though relations between army commanders and their chiefs of staff were not always harmonious, reminiscent of the tensions between Scharnhorst and Brunswick in 1806, the cooperation between Scharnhorst and Blücher, and later between Gneisenau and Blücher, was effective.<sup>53</sup> The army commander, freed from routine tasks, made the important decisions, competently advised by his chief of staff. Blücher, for instance, seems to have fully relied on the plans of his chief of staff. Another example for the good working relationship between a commander and his chief of staff was that between Bülow and Boyen. It was on Boyen's advice that Bülow decided to make a stand at Dennewitz, which resulted in a resounding victory.<sup>54</sup>

Yet, all was not well with Prussian staff work. As in 1806, staff blunders were far from rare. Gneisenau, for all his training and the quality of his operations plans, was an amateur in staff work. His unprofessional conduct significantly reduced the efficiency of staff work in the Army of Silesia. At Lützen, for instance, he took part in a cavalry charge

like a hot-blooded lieutenant. After Bautzen, he failed to organize a rearguard. On 16 August, he was on reconnaissance so that marching orders could only be given with considerable delay. Consequently, troops had to conduct a strenuous night march. On 18 August, again, he dispatched orders so late that troops had to make another night march. Gneisenau repeated this performance several times. Occasionally, he gave orders directly to brigades, bypassing the corps commander. At other times, he failed to inform his corps commanders of tasks and positions of their neighbours. After Leipzig, Gneisenau was too busy celebrating the victory to organize the pursuit.<sup>55</sup>

Furthermore, staff officers were occasionally used in an inappropriate way. Boyen, Bülow's chief of staff, for instance, was nearly captured on a reconnaissance mission though the proper place for the chief of staff was army headquarters, not a cavalry patrol.<sup>56</sup> This misuse of staff officers had also been a problem in 1806, when Scharnhorst had rallied broken troops at Auerstädt instead of coordinating the conduct of battle or preparing contingency plans for the retreat. The increased efficiency of the Prussian staff system, due to its improved organization and routine procedures, however, reduced the impact of individual mistakes on the operational efficiency of the army.

For all the improvements of the Prussian staff system, operational command and control was hampered in its efficiency by the lack of unity of command as well as by weaknesses in allied command and control. Prussian unity of command which had been so conspicuously lacking in 1806 had not improved by 1813. Instead of establishing a clear chain of command under considerations of military expediency, Frederick William repeated his mistakes of 1806. Instead of enforcing subordination, he failed to subordinate Borstell's brigade to Bülow's corps because Borstell and Bülow were equals in seniority, even though reform laws had explicitly abolished the precedence of seniority. Instead, Borstell's brigade remained an independent formation within the Army of the North. Though Borstell came to Bülow's support at Dennewitz, he failed him at other times with pointed reference to his independent status.<sup>57</sup>

Tsar Alexander experienced a similar problem. Miloradovich and his corps were not present at the battle of Lützen, partly because Miloradovich refused to serve under Wittgenstein to whom Alexander had entrusted the tactical direction of the battle.<sup>58</sup> The presence of the Prussian and Russian sovereigns with the army posed another problem, since neither of them could resist the temptation from meddling in their commanders' decisions and creating a parallel chain of command.<sup>59</sup> Again, this mistake had already been made by Frederick William in 1806.

Unity also lacked at the highest level of command. In autumn, the allied forces were organized in three armies, the Army of the North under Bernadotte, the Army of Silesia under Blücher and the Army of Bohemia under Schwarzenberg. Though a nominal commander-in-chief had been appointed, first Barclay de Tolly, later Schwarzenberg, the four sovereigns Alexander of Russia, Frederick William of Prussia, Francis of Austria and Prince Bernadotte of Sweden did not surrender control of their national contingents. Blücher, for instance, would not carry out Schwarzenberg's orders without Frederick William's assent.<sup>60</sup> Bernadotte's position as sovereign and army commander was particularly troublesome because it was difficult to prod him into action. Luckily for the allied cause, Bernadotte's Prussian subordinates Bülow, Borstell and Tauentzien acted on their own initiative. Blücher and Gneisenau even conspired with Bülow against Bernadotte, in order to achieve the junction of the two armies.<sup>61</sup> Whereas insubordination

of corps commanders in the *Grande Armée* had deleterious results, the same kind of behaviour in the allied armies could be beneficial.

In addition to the lack of unity of command on the allied side, the unimpressive staff work of Prussia's allies contributed to reducing the efficiency of operational command and control. Before the battle of Lützen, for instance, poor Russian staff work caused delays by crossing Yorck's and Blücher's lines of advance.<sup>62</sup> Luckily for the allies, the French system of command and control had lost so much of its former efficiency that allied weaknesses in command and control did not have serious consequences.

Not only the quality of French army corps and the staff system had suffered. The *Grande Armée's* capability to conduct reconnaissance, which had never been notably good, had further declined due to the poor quality of French troopers and the numerical superiority of allied cavalry. As a result, French cavalry had to keep close to supporting infantry, which significantly reduced the range of cavalry patrols.

The incapability of French cavalry to provide for the security of the corps was a serious problem. Ney, for instance, would not have blundered into the trap at Dennewitz, if his cavalry had discovered Bülow's corps in his flank. Girard's command was destroyed for the same reason. Similarly, the vanguard of the French army pursuing Blücher was easily ambushed at Haynau. In 1806, such oversights would not have been dangerous because superior French tactical flexibility had permitted timely reaction to surprise attacks. By 1813, however, the Prussians had matched French tactical flexibility so that want of accurate intelligence compromised the security of French corps on the march. A particularly serious failure of French reconnaissance occurred before the battle of Leipzig. On the basis of faulty reports, Napoleon seems to have assumed that Bernadotte's army was on the far bank of the Elbe, too far to join the allies. Consequently, Napoleon gave battle against an enemy far stronger than expected.<sup>63</sup>

Whereas insufficient military intelligence had not hampered Napoleon's prospects to outmanoeuvre an inflexible enemy in 1806, due to the corps system's inherent flexibility and security, matters were different in 1813. In 1806, the *Grande Armée's* corps organization had given Napoleon the advantage when armies clashed in the fog of war because the French corps could rapidly wrap themselves around the slower and more concentrated enemy army. In 1813 in contrast, both sides had equal chances to outmanoeuvre the enemy once contact had been made. With Napoleon's advantage in military organization gone, poor reconnaissance had a deleterious impact on operations.

Whereas French performance in reconnaissance had declined, the Prussians had learned to take military intelligence more seriously. Reconnaissance was conducted vigorously and on a regular basis.<sup>64</sup> However, they limited their reconnaissance activities in order to save the cavalry for battle and pursuit.<sup>65</sup> The Russians, who had a large number of Cossacks, preferred to use these for raiding rather than reconnaissance. Consequently, the allies did not take the utmost advantage of their superiority in cavalry for the purpose of reconnaissance. At Lützen, for instance, the allied vanguard blundered into two French divisions which had not been reported. At the Katzbach, Macdonald and Blücher were equally blind when their armies clashed.<sup>66</sup> On balance, however, allied reconnaissance seems to have been more effective than its French counterpart. This was vital in the context of the Trachenberg Plan, since battle could only be avoided if the allies learned about enemy strength and intentions in time.



Whereas the French supply system and transport organization of 1806 had permitted rapid movement, French supply in 1813 severely reduced Napoleon's prospects to manoeuvre the enemy into a position in which he could be decisively beaten. In 1806, the *Grande Armée* had largely lived off the country. This was no longer possible in 1813 for several reasons. Foraging parties could no longer stray far from their parent units for fear of being captured by the omnipresent raiders.<sup>67</sup> Even if no allied cavalry was present, local foraging was hardly rewarding since large French and allied armies had crossed Saxony and Silesia time and again. The small quantity of local resources which could still be found was quickly destroyed by the troops' lack of discipline. The allies exacerbated Napoleon's supply problems by torching villages along their line of retreat.<sup>68</sup> Since the countryside could not sufficiently contribute to feeding the army, towns became important for supply because they contained food reserves and bakeries. Even they, however, could not deliver the quantities needed. As a consequence, several means of supply had to be combined according to circumstances: provisions from towns along the line of advance, plunder, rear supply from the centres of operations and the integrated reserve carried by the army corps.<sup>69</sup>

Whereas French armies could be relatively well supplied close to cities such as Dresden and Leipzig, they had to rely on rear supply by waggon trains once they moved deeper into Silesia, Bohemia, or Brandenburg in pursuit of their elusive enemy. These waggon trains, amounting to 3,600 vehicles compared to 300 vehicles in 1806, reduced Napoleon's rate of advance as well as operational flexibility. In this respect, the *Grande Armée* of 1813 was not much different from the Prussian army from Frederician times to 1806.<sup>70</sup> Under these conditions, it was difficult to surprise, outmanoeuvre and force the enemy to give battle. Hence, the clumsiness of French supply and transport aided the allies in avoiding battle. When a battle had been fought, the slowness of the supply train prevented rapid pursuit. When Napoleon cut loose from rear supply in order to regain speed, troop numbers declined due to starvation and desertion.<sup>71</sup>

Though Napoleon was only concerned about his communications between the army and the centres of operations, such as Erfurt and Dresden, rather than communications with France, even these relatively short lines were vulnerable. The threat of allied raiders to his supply lines forced him to detach large numbers of troops for rear area security, troops which were lacking on the battlefield, thus aggravating allied numerical superiority.<sup>72</sup> Frederick the Great had experienced similar problems with Austrian light troops.

Whereas in 1806 the inflexibility of Prussian supply arrangements had hampered the Prussian army, much flexibility had been gained by 1813. Prussian troops relied on billeting, on requisitioning of local resources or on small, integrated supply columns similar to those used by the *Grande Armée* in 1806.<sup>73</sup> Though the want of local supplies affected not only the French but also the allies, the latter enjoyed the advantage of not having to fear French cavalry, which permitted them to send foraging parties far into the countryside. Furthermore, allied armies operated for much of the time close to areas such as Bohemia, Brandenburg, and eastern Silesia which were less exhausted than areas in which French forces were operating. Nonetheless, allied commanders had to take care not to overtax local supplies. Blücher and Schwarzenberg, for instance, decided not to unite in autumn 1813 because local resources would have been insufficient for the needs of both armies.<sup>74</sup>

Blücher's march to the Saale in October 1813 demonstrated how much operational flexibility had been gained by improvements in the supply system. With the decision to march westwards to the Saale, with utter disregard for his lines of communications, rather than retreating northwards across the Elbe in order to escape Napoleon's approaching army, Blücher's decision prepared the concentration of superior allied forces for the battle of Leipzig. The Prussian army had also shed much of the baggage, such as tents, which had hampered its movements like ball and chain in 1806. Yorck, for instance, did not hesitate to burn every unauthorized vehicle in the train. These advantages, however, were partly offset by the enormous Russian supply and baggage train which was reported to number 10,000 vehicles.<sup>75</sup> Still, on balance, the Prussian supply and transport organization had become far more appropriate for flexible manoeuvre than before.

Napoleon's plans still displayed the same operational skill as in 1806, but this time the initiative was not undisputed. In 1806, Napoleon had quickly carried out his operations plan with minor modifications. In 1813, an enterprising and vigilant enemy prevented him from bringing the campaign to a rapid conclusion. Consequently, Napoleon had to adapt his plans repeatedly. At first, he considered advancing through Prussia in order to relieve the besieged French fortresses in the East and disrupt Prussian mobilization. He then dropped this ambitious plan and intended, instead, to draw the enemy to Bayreuth, using Bertrand's and Oudinot's corps as a bait, and then advance on Dresden, across the enemy's communications, in order to cut him off from his base. As in 1806, the enemy would then have fought with reversed front—a promising condition for a battle of annihilation.

When the allies did not fall for Napoleon's ruse and advanced on Lützen instead, he attempted to build a trap by arranging the marching order of his corps in a way that he would not only have superior numbers on the battlefield but also a chance to cut off the enemy's retreat by a pincer movement. After this plan failed as well, Napoleon decided to split his forces in order to achieve two objectives at once. A secondary army was to threaten Berlin in order to induce the Prussians to desert the allied army and rush to defend their capital. In the meantime, the main army under Napoleon would follow the main enemy army to Dresden and beyond. This split of forces was excusable because Napoleon could still call on part of the secondary army to join him for the next battle.

The plan leading to the battle of Bautzen was to fix the enemy in front with the main army while Ney, with a secondary army, would outflank him and sever his line of retreat. Like Napoleon's plans before Lützen, this was one more attempt to use operational art in the pursuit of decisive battle. Again, success eluded Napoleon as Ney's flank manoeuvre at Bautzen foundered.<sup>76</sup>

In autumn, strategic conditions had shifted to the allies' advantage when Austria and Sweden joined the alliance, granting them numerical superiority. Napoleon now based his operations plans on his central position among three converging allied armies. He would contain two of the allied armies by secondary French armies and fall with superior numbers on the third in order to destroy it.<sup>77</sup> Frederick the Great had followed the same principle during the Seven Years' War. Though the idea was sound, operations based on this plan could, at best, result in the destruction of one of three enemy armies. Consequently, a decisive battle which could terminate the war with one blow was unlikely.

A chance to destroy the largest of the allied armies occurred at Dresden, when Napoleon planned to dispatch several corps into the enemy's rear in order to prevent his retreat into the Bohemian mountains. When Napoleon changed his plan, sending merely a single corps for this task, the allies escaped. The last chance to destroy one or two of the allied armies came in the days preceding the battle of Leipzig. The allies conducted a pincer movement with Blücher's and Bernadotte's armies advancing from the north, and Schwarzenberg's army advancing from the south. Napoleon tried to take advantage of his interior lines by concentrating first against one arm of the pincer and then against the other, but the plan miscarried and the pincer closed at Leipzig.

Apart from failing to seize his chance at Dresden, Napoleon committed some more operational mistakes. He conducted two minor offensives with secondary armies against Berlin in an attempt to create a diversion. Both offensives, conducted with insufficient forces, were repulsed with heavy loss, tilting the balance of manpower further to the allies' favour. His last operational error was the decision to leave a strong garrison under Gouvion Saint Cyr in Dresden instead of concentrating all available troops for the battle of Leipzig.

Even without these lapses of his operational art, Napoleon's chances to win by superior operational manoeuvre were remote, since the comparative quality of French and allied operational instruments, combined with the vigilance of the allies, prevented him from destroying enemy armies one by one.<sup>78</sup>

Allied operations plans in autumn were based on the Trachenberg Plan. Probably being aware that the balance of forces would further tilt in their favour in the course of time, as more and more recruits were on the way to the field armies, the allies decided to play for time and fight only minor battles rather than risking defeat in major battle. The three allied armies should advance concentrically but avoid any direct clash with forces under Napoleon's direct command. If Napoleon advanced on one allied army, it would retreat and lure Napoleon into vain pursuit, whereas the other two allied armies would advance into Napoleon's rear, destroying secondary French armies in their way. This attritional strategy would gradually wear the French army down without incurring any significant risk. Only when allied numerical superiority was overwhelming should decisive battle be sought. The Prussians were not entirely satisfied with this compromise plan as Scharnhorst had urged to seek battle at any opportunity.<sup>79</sup> Luckily for the allies, this rather simple and risky plan, which would have played into Napoleon's hands, was not adopted.

The Trachenberg Plan was consistently followed. The Army of Silesia, in particular, implemented it to the letter, always advancing in Napoleon's absence, always retreating in his presence. While Napoleon alternately chased Blücher and Schwarzenberg, his secondary armies were beaten at Großbeeren, Dennewitz, Hagelberg and the Katzbach. The battle of Dresden also followed the principle of the plan. The allies fought at Dresden, knowing that they faced Napoleon himself, because they could rely on a three-to-two superiority. Whereas superior numbers could not bring victory at Dresden, the same numerical disproportion later proved sufficient at Leipzig.<sup>80</sup>

Allied strategy was based on denying Napoleon what he most urgently needed—decisive battle. This strategy, however, could only be implemented at the operational level if Napoleon did not succeed in overtaking or outmanoeuvring his enemy. The allies owed their success in this respect to their high operational speed and flexibility. The use

of operational instruments, a flexible supply system and superior reconnaissance, particularly in the Prussian army, were instrumental.

Superior reconnaissance gave allied army commanders timely warning of Napoleon's approach. A supply system which did not depend on huge columns of vehicles permitted a high rate of advance and rendered a *volte-face* relatively easy. If the Army of Silesia had been followed by endless supply columns clogging the roads, it might not have escaped Napoleon's grip. Furthermore, if Prussian supply had still heavily depended on rear supply rather than a mix of requisitioning and reliance on the integrated supply reserve, Blücher's march to the Saale in October 1813 would not have been possible. The use of army corps, which advanced side by side in relatively short marching columns, also contributed to a high speed of movement as well as the capability to conduct rapid turns.

The frequent and dramatic changes of direction of army corps and their supply columns, and the rapid processing of military intelligence and issuing of orders depended on a capable staff system. The contribution of staff system and corps organization to operational flexibility was particularly important in the days preceding Leipzig. Blücher had to keep just out of range of Napoleon's main force but always close enough to prevent his enemy from pouncing on Schwarzenberg with all his might. The Army of Silesia succeeded in this difficult task, turning Napoleon's operational advantage of the interior lines into the tactical disadvantage of encirclement. The fruits of the Prussian reforms, the reformed supply system, the enhanced performance in reconnaissance, the adoption of army corps and the staff system denied Napoleon a rapid victory as in 1806.<sup>81</sup>

Not only had the Prussians created operational instruments, they had also begun to understand how to use them. Whereas Prussian generals had simply ignored the operational potential of all-arms divisions in 1806, the campaign of 1813 saw the corps of the Army of Silesia advancing side by side within supporting distance. In this way, the Army of Silesia took advantage of the corps system in the same way as the *Grande Armée* had done in 1806. The advance on a broad front facilitated reconnaissance and supply, confused the enemy, increased operational speed as well as flexibility and increased chances of cornering the enemy.

The Prussians were fully aware of these operational advantages. Not only had Frederick William and La Roche-Aymon displayed a basic comprehension of operational art, the Army of Silesia turned it into practice. Repeatedly, Blücher's corps operated so as to fix, outflank, encircle and annihilate the enemy. On 18 August, for instance, Blücher ordered his three corps commanders that the corps making contact with the enemy was to fix him, while the other corps should attack in flank and rear. On 19 August, the Army of Silesia came within reach of Macdonald's III Corps. Blücher promptly ordered Yorck's corps to fix the enemy in front whereas Langeron's corps would attack the right flank and Sacken's corps would cut off the enemy's retreat. Luckily for III Corps, it retreated in time. On 22 August, Blücher ordered Langeron to fix the enemy while Yorck and Sacken would swing into the enemy's left flank. Since the French attacked first on 23 August, this plan was not carried out. On 25/26 August, Blücher made one more attempt. This time, Langeron was to fix the enemy, and Yorck and Sacken were to fall on the enemy's left. On 8 September, Sacken was to fix the enemy, while Langeron and Yorck would outflank the enemy's left and cut off his retreat. These operations demonstrated that the

corps of the Army of Silesia could swap operational tasks as easily as French corps had done in 1806.<sup>82</sup>

From the bitter experience of the Jena Campaign the Prussians had also learned that the beaten enemy had to be subjected to relentless pursuit. Frederick William's dictum that the enemy had to be utterly destroyed was put into practice in the pursuit after Leipzig, which cost the French army thousands of prisoners. If Blücher had not been ordered to take the Gießen-Wetzlar road in order to leave the Gelnhausen-Fulda road to the sluggish Schwarzenberg, Napoleon's remaining force would have been sandwiched between Wrede's Bavarians and Blücher's corps at Hanau.<sup>83</sup>

The corps system was also dextrously used to deceive the enemy regarding Prussian objectives. During the march of the Army of Silesia to join the Army of the North, the manoeuvres of Blücher's corps bewildered Napoleon, causing him to misread Blücher's intentions until the union of the armies had been achieved.<sup>84</sup> The use of Prussian corps in encirclement, deception and flexible manoeuvre demonstrated that Prussian operational art had entered the stage of military history.

Though the Trachenberg Plan and its operational implementation were well considered, allied operations plans were not exclusively dictated by military considerations. The deployment of three separate armies, for instance, not only served the military purpose of a concentric advance, it also satisfied national interests: the Army of the North protected Berlin; the Army of Silesia shielded Russian communications with Poland; the Army of Bohemia guarded the approaches to Prague and Vienna.

Individual political motivations were particularly marked in the case of Bernadotte. True to his desire to avoid spilling Swedish as well as French blood, he remained passive instead of advancing against the secondary French armies in front. After Oudinot's defeat at Großbeeren as well as after Ney's defeat at Dennewitz, Bernadotte deliberately failed, or so his Prussian critics claimed, to pursue and annihilate the beaten enemy. After Großbeeren, Bernadotte could have easily cut the only escape route but failed to do so.<sup>85</sup>

The operations plans of the Army of Silesia took Bernadotte's uncooperative attitude into account. By marching northwards and joining the Army of the North, Blücher removed any pretext for Bernadotte to decline the advance. In other words, the celebrated union of the two armies, which was an important precondition for the victory at Leipzig, was at least partly motivated by Blücher's desire to prod the unenthusiastic ally into action.<sup>86</sup> Likewise, Blücher's decision to reinforce Bernadotte's army with one of his corps served the purpose of removing any pretext for shirking. In the event, Prussian operations plans, the amalgam of military and political considerations, reinforced by British pressure on Bernadotte, ensured the crucial union of the three armies at Leipzig.<sup>87</sup>

### **The tactical level**

In 1813, as in 1806, Napoleon's operational art was meant to transform operational manoeuvre into tactical manoeuvre. At Lützen, for instance, Napoleon had organized the march of the French corps in a way that Bertrand's corps could strike the allied left flank and Macdonald's corps and Latour-Maubourg's cavalry corps could strike the allied right flank in order to encircle the allied army, while Ney's corps would be fixing the enemy in

front. In the event, the plan did not work because the allies were vigilant and had their flanks covered by watercourses.

The operational and subsequent tactical manoeuvres at Bautzen came even closer to encircling and annihilating the enemy army, when Napoleon ordered Ney to attack the allied right flank and rear with three corps. The operational move into the allied flank was translated into a tactical flank attack. Faulty execution by Ney as well as a quick Prussian reaction, however, left the line of retreat open, enabling the allies to disengage in good order.<sup>88</sup> Otherwise, Napoleon's operational art would have culminated in decisive battle once more.

Lützen and Bautzen were the last opportunities to defeat the allies decisively in one battle. After the armistice, the allies operated in three separate armies which were much harder to engage and destroy in one battle. In addition to these operational problems, the decline of French tactical effectiveness, due to low training standards of officers as well as men, reduced chances of inflicting a crushing defeat followed by destructive pursuit.<sup>89</sup>

Whereas the tactical quality of the French army had declined, the Prussian army had made progress in that respect since Jena. The corps organization had been adopted, giving Prussian commanders the same tactical and operational advantages as the French. Tactical training had been modernized by including combined arms tactics and contested exercises. Even the recently levied *Landwehr* formations were quickly turned into effective tactical units which proved their worth in numerous battles and encounters.

Prussian tactical command and control had also much improved. The chain of command, running from army to divisional and brigade level, was more efficiently used than in 1806, which increased tactical flexibility and responsiveness as Bülow's spontaneous attack at Großbeeren showed. A further proof of this enhanced responsiveness was given when Blücher succeeded in rapidly conducting an orderly retreat from an exposed position at Bautzen, simultaneously shifting reserves to his flank in order to repulse Ney's attacks. If the Prussian reaction had been slower or less competently conducted, a large part of the Prussian army at Bautzen would have been cut off and forced to surrender. The encounter at Katzbach also showed rapid and tactically appropriate Prussian reactions as corps commanders were given only short directives, leaving all details to them.<sup>90</sup>

Still, Prussian training was not without shortcomings. The ideal of the universal infantryman could not be fully turned into practice, because training time was often too short to turn recruits both into competent skirmishers and line infantrymen. Furthermore, not all officers had yet fully understood the new tactical concepts. Even Yorck, a competent tactician, failed to make the best use of all three arms at Leipzig. On balance, however, the Prussian army had become more than a match for the French in tactics. Combined arms tactics and the combination of line and light infantry, which had been so conspicuously lacking in 1806, were now regularly practised.<sup>91</sup>

The Prussian army could, however, not always make the most of its tactical improvements since it was fighting side by side and sometimes under the command of allies which held more conservative views on tactics. At Lützen, for instance, Wittgenstein forced his Prussian subordinates to deploy in long lines of infantry as if he were fighting a Frederician battle. Under these conditions, the tactical flexibility of the Prussian brigade system was wasted.<sup>92</sup>

Even though enhanced Prussian tactical effectiveness was reduced by occasional royal intervention and maladroit Russian generalship, the allied armies had pulled even with the French in tactics. Whereas Napoleon had succeeded in destroying the Prussian army in one day in the Jena Campaign, the restoration of symmetry in tactical organization and skill had recreated the attritional nature of battle. Similar to Frederick's days, the beaten allied armies could retreat fighting and in good order as Lützen, Bautzen and Dresden demonstrated. In contrast to Jena and Auerstädt, French losses were higher than those of the allies at Lützen and Leipzig. Only Dresden was a clear victory for Napoleon in terms of casualties. The three-day sloggish match of Leipzig, which resulted in losses of about a fifth of the troops committed, was the best example for the return of attrition in Napoleon's battles. Under these conditions, operational art could no longer deliver decisive battle at limited cost.<sup>93</sup>

### Summary

Though a direct comparison between French and Prussian operational art is difficult since Prussian corps were combined with allied contingents in mixed armies, some observations can be made. Prussian operational instruments now proved their worth in war. Prussian corps, their coordination and control by the staff system and a flexible mode of supply gave Blücher, the only Prussian army commander, the opportunity to practice Prussian operational art for the first time.<sup>94</sup> Even though the Silesian Army's only single-handed success was the destruction of Macdonald's army, the quality and adroit use of Prussian operational instruments was demonstrated in their contribution to the success of the Trachenberg Plan.

Whereas Napoleon's operational art consistently aimed for battle, Prussian operational art was sometimes used as a means to avoid battle, when facing a superior enemy, and sometimes to seek it, when facing an equal or inferior enemy. Though the Prussians had not yet completely mastered the routines of operational art, in staff work in particular, these shortcomings were more than compensated for by the dramatic decline in the quality of French operational instruments as well as the poor strategic conditions under which Napoleon had to operate.

With both sides now relying on the use of operational instruments in operational art, prospects for crushing the enemy by superior manoeuvre had become remote. Likewise, the adoption of all-arms tactics by both sides had created a stalemate at the tactical level. In combination, the symmetry at the operational as well as the tactical levels had restored the attritional nature of battle as well as campaigning which had been so familiar in Frederick's days.

The influence of military theory on the evolution of Prussian operational art can be inferred from the creation of operational instruments as well as from Blücher's use of operational instruments in accordance with the ideas spelled out by Frederick William and La Roche-Aymon. Likewise, the increased flexibility of Prussian supply arrangements, better performance in reconnaissance, improved training of officers and men and enhanced tactical efficiency demonstrated the impact of military theory.

The influence of non-military developments on the evolution of operational art can be traced in the Prussian mobilization effort. Spiritual mobilization was the precondition for

the mobilization of manpower as well as material. This effort, in turn, permitted the creation of an army large enough to allow for the establishment of several army corps. The influence of non-military developments also became apparent in the increased use of Prussia's human resources by the introduction of meritocratic principles, which provided the officer corps necessary for operational art and combined arms tactics.



## CONCLUSION

During the Seven Years' War, Frederick the Great did not achieve the decisive battle which Prussia's strategic situation demanded, due to limitations rooted in coalition warfare, army organization, supply, fortresses and tactics. With the invention of the all-arms division and, later, the army corps with their complementary staff system as well as improvements in matters of supply and tactics, the prospects for decisive battle improved, as chances for manoeuvring the enemy into a corner and destroying him with all-arms tactics increased.

The key feature of the change in warfare was the fluent transition from a campaign manoeuvre to a battlefield manoeuvre as divisions, and later corps, arrived on the battlefield from different directions and joined combat as independent tactical formations. Thus, the dividing line between strategy and tactics became blurred, creating a strategic-tactical continuum which suggests the introduction of the operational level in the analysis of warfare of this period. Contemporaries were by no means oblivious to the merging of the strategic and the tactical levels. Guibert, Bülow and Napoleon alluded to this feature of warfare in their time.

Whereas armies of revolutionary France had been beset by various handicaps, such as inexperience in the use of divisions and political interference, these shortcomings had been rectified by the time Napoleon's *Grande Armée* achieved a decisive victory over Prussian armies at Jena and Auerstädt. Once Prussia had created her own operational instruments, developed an understanding for operational art and improved tactical efficiency, however, symmetry at the operational as well as the tactical levels returned, resulting in an attritional campaign in 1813.

The evolution of operational art was driven along by three dynamic interrelationships. The interplay between military and non-military factors, which was by no means always conducive to military effectiveness, contributed to the evolutionary process at several occasions.

The costly and inefficient French army of the Seven Years' War contributed to France's financial predicament which became a major cause of the Revolution. The Revolution led to war and civil war, which prompted a radical group to seize power and embrace a strategy of annihilation. In pursuit of this strategy, use was made of operational instruments in order to achieve decisive battles of annihilation. The strategy of annihilation called for total mobilization. Mobilization of men and material, aided by the powerful grip of the radical government, provided the manpower needed for manning the divisions and corps. The introduction of meritocracy, a result of revolutionary ideology, resulted in the kind of officer corps needed to command and control divisions

and corps and use them effectively in operations as well as tactics. The need to maintain the mass army created by total mobilization forced France to conquer territory and resources. In the process, the army turned into a caesarian army which finally lifted its successful general on the shield.

With Consul Bonaparte, later Emperor Napoleon, in control of state and army, operational art was further enhanced. His range of control permitted him not only to improve the quality of operational instruments, but also to create propitious conditions for their use by integrating diplomacy, domestic policies and military strategy. Driven by the domestic imperative, Napoleon had to rely on operational art in order to deliver rapid and inexpensive victory, which would result in a dictated peace. This peace would produce the spoils which were so important for the motivation of his army. The motivation of the individual soldier permitted forced marches and reliance on foraging which, by increasing operational speed and flexibility, improved prospects for achieving the dictated peace following the total victory at Jena.

Following the disaster of 1806, Prussia underwent civil and military reforms, which resulted in social and political change. The reforms not only achieved their main purpose, the rejuvenation of the Prussian monarchy, but they also created Prussian operational instruments as well as the administrative structure necessary to maintain them.

The interplay between military theory and practice was another process contributing to the evolution of operational art. In France, reforms began during the Seven Years' War with de Broglie's invention of the divisional system. Guibert and Bourcet built on the experiences of the Seven Years' War and de Broglie's invention, and developed a theory of operational art. Not least due to Guibert's involvement in Bourbon army reforms, the revolutionary governments inherited an army whose operational as well as tactical potential had been considerably improved. In Prussia, observers of French revolutionary armies did not succeed in fundamentally reforming the Prussian army, though they achieved the introduction of all-arms divisions and a permanent general staff. After Jena, however, Prussian military reforms were conducted by theorists such as Scharnhorst along the lines of their observations made during the wars of the French Revolution. This marriage between theory and practice, combined with civil reforms, begat the operational instruments as well as the improved tactics and a flexible supply system which Prussia used in 1813. Drawing on the experience of 1806, Frederick William and La Roche-Aymon had also begun to develop a theory of Prussian operational art, which was used to good effect in 1813.

Finally, the interplay between military theory and practice in France and in Prussia made its contribution to the evolution of operational art. The defeat of France at the hands of Prussia prompted French military reforms, which prepared the ground for the success of revolutionary armies. Whereas French operational capabilities steadily increased, there was little progress towards the creation of operational instruments in Prussia. Only after the defeat at Jena did Prussia rise to the French challenge, carried out the necessary reforms, and was able to face the French adversary in 1813 on equal terms.

The evolution of operational art, driven by the three dialectic processes, had progressed in stages. In the first stage, revolutionary France had experimented with operational art, though with limited success. In the second stage, Napoleon used operational art with remarkable success against an adversary clinging to outdated modes of warfare and organization. In the final stage, Napoleon's operational art was

successfully challenged by the Prussian brand of operational art. Only for a short time could operational art deliver on its promise of rapid victory. Once all belligerents had developed operational instruments and practised operational art, the return of attritional warfare was the consequence.

# APPENDIX

## Chronology of the Jena Campaign

- 12 July 1806 The Confederation of the Rhine is established.
- July-September Mounting diplomatic tensions when France plays off Prussia, Great Britain and Russia against each other.
- 9 August Prussia mobilizes.
- 6–12 September Prussian troops invade Saxony and force her into an alliance.
- Late September to 6 October The *Grande Armée* is put on a war footing and moves into position in the Bamberg-Nürnberg-Bayreuth area. Mortier's VIII Corps at Mainz and Louis Bonaparte's army in Holland create diversions. Prussian field armies move into position: Rüchel in Eisenach, Brunswick in Gotha-Erfurt area, Hohenlohe at Jena with detachments at Schleiz and Hof, reserve under Württemberg at Magdeburg.
- 7 October Napoleon receives the Prussian ultimatum.
- 8 October The French invasion begins in three columns. Left column: Lannes (V Corps), Augereau (VII Corps) via Gräfenenthal on Saalfeld. Centre column: Murat with part of the cavalry reserve, Bernadotte (I Corps), the bulk of the cavalry reserve, Davout (III Corps) via Nordhalben on Saalburg. Right column: Soult (VI Corps), Ney (IV Corps) via Münchberg on Hof. First encounter at Saalburg. A Prussian force of 11,000 men under the Duke of Weimar is dispatched on a raid on Schweinfurt and Fulda.
- 9 October Skirmish between Bernadotte's corps and Hohenlohe's detachment (Tautenzien) at Schleiz.
- 10 October Lannes beats Hohenlohe's detachment under Prince Louis Ferdinand at Saalfeld.
- 10–11 October Assuming the Prussian army at Gera, Napoleon diverts his corps in this direction.
- 12–13 October Napoleon swings the *Grande Armée* westwards.
- Positions on 12 October: Davout (III Corps) at Naumburg, Bernadotte (I Corps) Zeitz-Naumburg road, Lannes (V Corps) approaching Jena, Augereau (VII Corps) Kahla, Soult (VI Corps) Gera, Ney (IV Corps) Auma-Mittel-Pöllnitz.

- Saxe-Weimar at Meiningen, Rüchel at Weimar, Brunswick between Weimar and Jena, Hohenlohe between Kapellendorf and Jena, Württemberg at Bernburg.
- 13 October Prussians decide to withdraw northwards. Brunswick is to march via the Kösen pass on Freiburg and Halle to reestablish communications with Magdeburg and Berlin and to link up with the reserve under Württemberg. Hohenlohe and Rüchel are to cover Brunswick's retreat by remaining in the Jena-Weimar area. Lannes establishes his V Corps on the Landgrafenberg on the left bank of the Saale opposite Jena. Napoleon orders Davout (III Corps) to continue his advance westwards and Bernadotte (I Corps) to march on Dornburg to intercept the Prussian retreat. The other corps are to be concentrated on Jena.
- 14 October Davout (III Corps) heading west and Brunswick's army heading east clash at Hassenhausen (Battle of Auerstädt). At Jena, Hohenlohe, later supported by Rüchel, is attacked and defeated by Lannes (V Corps), Augereau (VII Corps), Ney (IV Corps), Soult (VI Corps), the Guard and part of the cavalry reserve. Bernadotte (I Corps) marches on Dornburg and has no part in either battle.
- 15 October to 7 November Pursuit and capture of the fleeing Prussian formations under Duke of Weimar, Blücher and Hohenlohe.
- 17 October Destruction of Württemberg's reserve by Bernadotte (I Corps) at Halle.

### **Chronology of the campaigns of 1813**

- 20 December 1812 Beginning of limited Prussian mobilization.
- 30 December Convention of Tauroggen.
- 28 February 1813 Russo-Prussian alliance.
- 16 March Prussia declares war on France.
- Late March/early April French and allies face each other along the Elbe.
- 30 April Napoleon crosses the Saale. Allies decide to attack him at Lützen.
- 2 May Allies defeated at Lützen.
- 3–20 May Allies retreat on Dresden and then on Bautzen, followed by Napoleon. A secondary army under Ney is formed to hold Wittenberg and threaten Berlin.
- 20–21 May Allies defeated at Bautzen.
- 2 June to 14 August Armistice. Both sides rest, recuperate, train replacements. Allies adopt the Trachenberg Plan. Allies form three armies: the Army of the North (Bernadotte), the Army of Silesia (Blücher), the Army of Bohemia or Main Army (Schwarzenberg).
- 12 August Austria declares war on France.
- 23 August Oudinot's advance on Berlin repulsed at Großbeeren.

- 26 August Macdonald defeated at the Katzbach.
- 26–27 August Army of Bohemia defeated at Dresden.
- 30 August Vandamme beaten at Kulm.
- 6 September Ney's advance on Berlin repulsed at Dennewitz.
- Early October Army of Silesia and Army of the North join forces.  
All three allied armies advance on Leipzig, avoiding a direct encounter with Napoleon.
- 16–18 October Combined allied armies defeat Napoleon at Leipzig.
- 30 October Bavarians trying to block French retreat are beaten at Hanau.

# NOTES

## INTRODUCTION

- 1 A.S.H.Irwin, 'The Levels of War: Operational Art and Campaign Planning', *SCSI Occasional Paper*, no. 5, 1993, p. 1; Brian Holden Reid, 'The Operational Level of War and Historical Experience', J.J.G.Mackenzie and Brian Holden Reid (eds), *The British Army and the Operational Level of War* (London: Tri-Service Press, 1989), p. 7.
- 2 Michael D.Krause, 'Moltke and the Origins of Operational Art', *Military Review*, Vol. LXX, No. 9, September 1990, pp. 28–45; Bruce W.Menning, 'Operational Art's Origins', *Military Review*, Vol. LXXVII, No. 5, September 1997, pp. 32–48; James J.Schneider, 'The Loose Marble—and the Origins of Operational Art', *Parameters*, March 1989, pp. 85–99; James J.Schneider, 'Theoretical Implications of Operational Art', *Military Review*, September 1990, pp. 19–27.
- 3 Though the Chappe telegraph increased military effectiveness at the strategic level and Gribeauval guns at the tactical level, technology was not the driving force of operational art.
- 4 Though strictly speaking not part of military strategy, matters such as diplomacy, social and economic policies will also be discussed here as far as they had an impact on the preparation and conduct of war.
- 5 Though the terms 'operational art' and 'operational level' were used in neither the Frederician nor the Napoleonic period, they may be applied nonetheless since the concept of the third level of warfare was emerging in this time, particularly in the works of Guibert.
- 6 Battle can serve either an operational or a strategic objective. In 1806, for instance, Napoleon's strategic objective was the destruction of the Prussian army. His operational objective was the advance through the Franconian Forest directly on Berlin in order to bring the Prussian army at bay and destroy it in decisive battle. The minor battles at Saalfeld and Schleiz on 10 October served the *operational* purpose of permitting the French columns to debouch from the Franconian Forest. The battle of Jena, in contrast, served the *strategic* purpose of destroying the Prussian army.
- 7 Jean Colin, *The Transformations of War*, trans. L.H.R.Pope-Hennessy (London: Rees, 1912), p. 246. Similarly Hubert Camon, *Le Système de Guerre de Napoléon* (Paris: Berger-Levrault, 1923), p. 73.
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- 9 Colin, *Transformations*, p. 262; Jules Louis Lewal, *La Veillée de Iéna: Étude de Stratégie de Combat* (Paris: Chapelot, 1899), p. 82.
- 10 Hans Delbrück, *Historische und Politische Aufsätze*, 2nd edition (Berlin: Stilke, 1907), pp. 223–302.
- 11 Robert M.Epstein, *Napoleon's last Victory and the Emergence of Modern War* (Lawrence: University Press of Kansas, 1994); Jay Luvaas, 'Thinking at the Operational Level',

*Parameters*, Spring 1986, pp. 2–6; Clayton R. Newell, *The Framework of Operational Warfare* (London: Routledge, 1991).

## 1

## MILITARY THEORY AND PRACTICE: 1740–1791

- 1 In this work, a battle is considered decisive if its consequences are such that the enemy cannot continue the war. Though Prussia fought on after Jena and Auerstädt, the two battles can be regarded as decisive nevertheless, because no more than about 15 per cent of the Prussian army remained effective. Prussia continued the war in East Prussia and Poland only as an auxiliary to Russia.
- 2 Maurice de Saxe, 'Reveries on the Art of War', T.R. Phillips (ed.), *Roots of Strategy* (London: Lane, 1943), pp. 95–162, 160.
- 3 *Ibid.*, pp. 102–3.
- 4 *Ibid.*, pp. 106, 122, 130. A strange notion taking into account that Saxe had successfully commanded armies of twice that size in battle.
- 5 *Ibid.*, pp. 107–8, 123, 131.
- 6 *Ibid.*, pp. 101, 119, 129–30.
- 7 *Ibid.*, pp. 105, 138.
- 8 *Ibid.*, pp. 161–2.
- 9 Emile G. Léonard, *L'Armée et ses Problèmes au XVIIIe Siècle* (Paris: Plon, 1958), p. 127.
- 10 Saxe, 'Reveries', p. 137.
- 11 For Saxe's views on tactics see Saxe, 'Reveries', pp. 109–19, 126–8, 153. For his views on pursuit see Saxe, 'Reveries', p. 161.
- 12 Frederick the Great, A. von Thaysen (ed.), *Militärische Schriften* (Berlin: Wilhelmi, 1882), pp. 1–79; Frederick the Great, G.B. Volz (ed.), *Die Politischen Testamente Friedrichs des Grossen* (Berlin: Hobbing, 1920), p. 81.
- 13 Frederick, *Schriften*, pp. 64–5, 90; Frederick, *Testamente*, p. 36.
- 14 Frederick, *Testamente*, p. 86.
- 15 Frederick, *Schriften*, pp. 3–4, 6, 107.
- 16 For Frederick's views on the officer corps see Frederick, *Schriften*, p. 321; Frederick, *Testamente*, pp. 39, 99.
- 17 Frederick, *Schriften*, p. 86.
- 18 *Ibid.*, p. 96.
- 19 Frederick the Great, G.B. Volz (ed.), *Die Werke Friedrichs des Großen* (Berlin: Hobbing, 1913), 15 vols, VI, p. 108; Frederick, *Testamente*, p. 170.
- 20 Frederick, *Schriften*, pp. 84–5; Frederick, *Werke*, VI, p. 90; Flavius Renatus Vegetius, *Epitoma Rei Militaris*, trans. F. Wille (Frankfurt: Sauerländer, 1986), III, pp. 3, 26.
- 21 Frederick, *Schriften*, pp. 93–4, 99; Frederick, *Werke*, VI, p. 108. On the contradictions between Frederick's theory and practice see Jay Luvaas, *Frederick the Great on the Art of War* (New York: Free Press, 1966), p. ix.
- 22 For Frederick's views on tactics see Frederick, *Schriften*, pp. 24–6, 64–5, 75, 81; Frederick, *Werke*, VI, pp. 92, 106, 331; Frederick, *Testamente*, p. 89. For the oblique order see Vegetius, *Epitoma*, III, p. 20.
- 23 Frederick, *Schriften*, p. 82; Frederick, *Werke*, VI, pp. 104–5.
- 24 Alvaro José Antonio Ignacio de Santa Cruz, *Réflexions Militaires et Politiques* (Paris: Guerin, 1735–1738), 11 vols, *Réflexions*, IV, pp. 27, 197–8, X, p. 33.
- 25 Santa Cruz, *Réflexions*, I, pp. 166–9, III, pp. 353–81, 386, 400, 419, 426–7, 438–42, X, pp. 121, 268–9, 272, XI, pp. 1–17, 22–3, 41, 52, 79, 89.
- 26 Santa Cruz, *Réflexions*, X, p. 32; Vegetius, *Epitoma*, III, p. 11.



- 27 Santa Cruz, *Réflexions*, VI, p. 203, X, p. 121.
- 28 On Prussian war aims see Christopher Duffy, *Frederick the Great: A Military Life* (London: Routledge, 1985), pp. 22–3, 85, 242; Johannes Kunisch, ‘Die große Allianz der Gegner Preußens im Siebenjährigen Krieg’, Bernhard R.Kroener (ed.), *Europa im Zeitalter Friedrichs des Grossen* (München: Oldenbourg, 1989), pp. 79–99, 81–3.
- 29 On Prussian strategy see Frederick to Field Marshal Lehwaldt, 4 May 1757, Frederick the Great, J.G.Droysen, M.W.Duncker and H.C.L.von Sybel (eds), *Politische Correspondenz Friedrichs des Grossen* (Berlin: Duncker, 1879–1925), 39 vols, XV, no. 8902; Frederick to Field-Marshal Keith, 14 May 1757, Frederick, *Correspondenz*, XV, no. 8941; Frederick to Field-Marshal Lehwaldt, 29 September 1757, Frederick, *Correspondenz*, XV, no. 9372; Frederick to Field-Marshal Keith, 24 November 1757, Frederick, *Correspondenz*, no. 9540. Also Christopher Duffy, *The Army of Erederrick the Great* (London: David and Charles, 1974), pp. 20–1, 174, 181; Duffy, *Military Life*, p. 185; Hew Strachan, *European Armies and the Conduct of War* (London: Routledge, 1983), pp. 14–15.
- 30 On Prussian mobilization in general see David G.Chandler, *Atlas of Military Strategy: The Art, Theory and Practice of War, 1618–1878* (London: Arms and Armour, 1996), pp. 72–3; Christopher Duffy, *The Military Experience in the Age of Reason* (Ware: Wordsworth, 1998), p. 24; Werner Gembruch, ‘Struktur des preußischen Staates und außenpolitische Situation zu Beginn der Herrschaft Friedrichs des Großen’, Militärgeschichtliches Forschungsamt (ed.), *Vorträge zur Militärgeschichte*, Vol. VIII: *Friedrich der Große und das Militärwesen seiner Zeit* (Bonn: Mittler, 1987), pp. 9–33; Curt Jany, E.Jany (ed.), *Geschichte der preußischen Armee: Vom 15. Jahrhundert bis 1914*, 2nd revised edition (Osnabrück: Biblio, 1967), 4 vols, II, p. 274; Bernhard R.Kroener, ‘Wirtschaft und Rüstung der europäischen Großmächte im Sieben-jährigen Krieg’, Militärgeschichtliches Forschungsamt (ed.), *Vorträge zur Militärgeschichte*, Vol. VIII: *Friedrich der Große und das Militärwesen seiner Zeit* (Bonn: Mittler, 1987), pp. 143–76, 153; Bernhard R.Kroener, ‘Die materiellen Grundlagen österreichischer und preussischer Kriegsanstrengungen, 1756–1763’, Bernhard R.Kroener (ed.), *Europa im Zeitalter Friedrichs des Grossen* (München: Oldenbourg, 1989), pp. 47–79, 76–8.
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- 34 For the relationship between Frederick and his nobility see Frederick, *Testamente*, pp. 29–30, 78. Also Büsch, *Sozialleben*, p. 143; Gordon A Craig, *The Politics of the Prussian Army: 1640–1945* (London: Oxford University Press, 1964), pp. 4, 9–11; Duffy, *Army*, pp. 24–5, 40, 161; Duffy, *Military Life*, pp. 13, 48; Duffy, *Experience*, pp. 25, 45; Jany, *Armee*, II, p. 227; Salmonowicz, *Preußen*, pp. 128–31; Theodor Schieder, *Friedrich der Große: Ein Königtum der Widersprüche* (Frankfurt: Propyläen, 1983), pp. 60, 64, 69–72, 349; Williams, *Europe*, pp. 321, 325–8.
- 35 On Frederick's universal control see Regling, 'Grundzüge', pp. 13–14; Schieder, *Friedrich*, p. 185. Henshall argues that the range of power and control of absolutist monarchs was rather limited since they had to rely on consent and consultation. The sometimes rather brutal treatment of the Prussian nobility by the Hohenzollern kings, however, suggests that Frederick's royal power was formidable indeed. See Nicholas Henshall, *The Myth of Absolutism: Change and Continuity in Early Modern European Monarchy* (London: Longman, 1992), pp. 3–4.
- 36 On Prussia as a military state see Büsch, *Sozialleben*, pp. 21–7, 30, 84; Childs, *Armies*, p. 141; André Corvisier, *Armies and Societies in Europe: 1494–1789*, trans. A.T.Siddall (Bloomington: Indiana University Press, 1979), pp. 116–18; Craig, *Politics*, p. 14; Salmonowicz, *Preußen*, pp. 135–6; Williams, *Europe*, pp. 334–5, 337. Kroener has calculated that up to a quarter of the Prussian population consisted of soldiers, cantonists and their families. See Kroener, 'Wirtschaft', p. 151.
- 37 On the composition of the officer corps see Büsch, *Sozialleben*, p. 95; Williams, *Europe*, p. 325.
- 38 On limitations of social and economic changes see Büsch, *Sozialleben*, pp. 100, 105; Salmonowicz, *Preußen*, p. 126; Schieder, *Friedrich*, p. 317; Peter H. Wilson, *German Armies: 1648–1806* (London: UCL, 1998), p. 244.
- 39 For spiritual mobilization see Frederick to Minister Plotho, 4 May 1757, Frederick, *Correspondenz*, XV, no. 8903; Frederick to Minister Plotho, 15 June 1757, Frederick, *Correspondenz*, XV, no. 9102; Frederick, *Schriften*, p. 34. Also Duffy, *Experience*, p. 303; Luvaas, *Frederick*, p. 48; Gerhard Papke, 'Von der Miliz zum Stehenden Heer: Wehrwesen im Absolutismus', Militärgeschichtliches Forschungsamt (ed.), *Handbuch zur deutschen Militärgeschichte: 1648–1939* (Munich: Bernhard und Graefe, 1964–1979), Vol. I, pp. 1–311, 187; Regling, 'Grundzüge', p. 21.
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- 41 For the impact of desertion on military effectiveness see Bräker, *Tockenburg*, pp. 127–8; Lojewski, *Selbstbiographie des Husarenobersten von Lojewski* (Leipzig: Kollmann, 1843), 2 vols, II, p. 27. Also Childs, *Armies*, p. 70; Duffy, *Army*, pp. 67, 152; Duffy, *Experience*, p. 160; Luvaas, *Frederick*, p. 15; Regling, 'Grundzüge', p. 119; Ritter, 'Warfare', p. 105.
- 42 For the omnipresence of violence see Karl Friedrich Klöden, *Von Berlin nach Berlin: Erinnerungen 1786–1824*, 2nd edition (Berlin: Verlag der Nation, 1978), pp. 45, 77. Also David Gates, *The Napoleonic Wars: 1803–1815* (London: Arnold, 1997), p. 10.
- 43 For morale and motivation in the Prussian army see Ernst Friedrich Rudolf von Barsewisch, J. Olmes (ed.), *Von Rossbach bis Freiberg: 1757–1763, Tagebuchblätter eines friderizianischen Fahnenjunkers und Offiziers* (Krefeld: Rühl, 1959), pp. 38, 45, 75, 80, 152, 176; Hermann von Boyen, Dorothea Schmidt (eds), *Erinnerungen aus dem Leben des Generalfeldmarschalls Hermann von Boyen* (Berlin: Brandenburgisches Verlagshaus, 1990), 2 vols, I, pp. 168–9; Bräker, *Tockenburg*, pp. 113, 130; Frederick to Minister Finckenstein,

- 30 November 1757, Frederick, *Correspondenz*, XVI, no. 9554; Klöden, *Berlin*, pp. 50, 53, 58–9; Lojewski, *Selbstbiographie*, I, pp. 7, 36–7, 163, 251, 273, 294, II, pp. 26, 196–7, 205; L.M. von Lossow, *Denkwürdigkeiten zur Charakteristik der preußischen Armee unter dem großen König Friedrich dem Zweiten* (Glogau: Heymann, 1826), pp. 197, 199, 211, 224. Also Johann Christoph Allmayer-Beck, 'Die friderizianische Armee im Spiegel ihrer österreichischen Gegner', *Militärgeschichtliches Forschungsamt* (ed.), *Vorträge zur Militärgeschichte*, Vol. VIII: *Friedrich der Große und das Militärwesen seiner Zeit* (Bonn: Mittler, 1987), pp. 33–55, p. 43; Anderson, *War*, p. 175; Black, *Warfare*, p. 228; Bleckwenn, 'Bauernfreiheit', pp. 62–4; Childs, *Armies*, pp. 53, 165; Corvisier, *Armies*, p. 156; Duffy, *Army*, pp. 27, 35–6, 56, 60, 176; Duffy, *Military Life*, pp. 109, 130, 144, 164, 169, 203; Duffy, *Experience*, pp. 8, 11, 36, 83, 100, 124–5, 130–3, 264; Siegfried Fiedler, *Grundriß der Militär- und Kriegsgeschichte* (München: Schild, 1976), 2 vols, I, p. 296; Siegfried Fiedler, *Kriegswesen und Kriegführung im Zeitalter der Kabinettskriege* (Koblenz: Bernhard und Graefe, 1986), pp. 294, 296; Jany, *Armee*, II, pp. 219–22, 243, 283, 323; Lee Kennett, *The French Army in the Seven Years' War: A Study in Military Organization and Administration* (Durham: Duke University Press, 1967), p. 80; Wolfgang Petter, 'Zur Kriegskunst im Zeitalter Friedrichs des Großen', Bernhard R. Kroener (ed.), *Europa im Zeitalter Friedrichs des Grossen* (München: Oldenbourg, 1989), pp. 245–69, 268. Ritter, 'Warfare', p. 103; Dennis Showalter, *The Wars of Frederick the Great* (London: Longman, 1996), pp. 22, 24, 251; Russell F. Weigley, *The Age of Battles: The Quest for Decisive Warfare from Breitenfeld to Waterloo* (Bloomington: Indiana University Press, 1991), p. 189; Wilson, *Armies*, pp. 332–4. For a comparison with Hanover see Ralf Proeve, *Stehendes Heer und städtische Gesellschaft im 18. Jahrhundert: Göttingen und seine Militärbevölkerung, 1713–1756* (München: Oldenbourg, 1995), pp. 150–5, 323. Johann Conrad Döhla, a soldier of the Hessian contingent in the War of American Independence, kept a diary, which throws some light on the attitudes of eighteenth-century soldiers towards corporal punishment. He mentioned punishment by flogging in his regiment almost every day without any comment. His comrades seemed to tolerate this kind of treatment as well. This becomes obvious from the fact that Döhla and his fellow soldiers did not hesitate to mutiny whenever they felt unjustly treated. Apparently, they did not regard corporal punishment in itself as unjust because their mutinies were always fuelled by specific grievances. See Johann Conrad Döhla, *A Hessian Diary of the American Revolution*, trans. B.E. Burgoyne (London: University of Oklahoma Press, 1990).
- 44 For the role of contributions in Frederick's strategy see Frederick to Field-Marshal Lehwaldt, 6 January 1758, Frederick, *Correspondenz*, XVI, no. 9670; Frederick to Minister Borcke, 7 April 1758, Frederick, *Correspondenz*, XVI, no. 9903. Also Anderson, *War*, p. 181; Kroener, 'Grundlagen', p. 76.
- 45 For difficulties preventing strategic penetration see Frederick, *Testamente*, p. 90; Lojewski, *Selbstbiographie*, I, p. 105, II, pp. 89, 157. Also Childs, *Armies*, p. 113; Duffy, *Army*, pp. 161, 180; Duffy, *Military Life*, pp. 158–9; Duffy, *Experience*, p. 276; John A. Lynn, 'Food, Funds, and Fortresses: Resource Mobilization and Positional Warfare in the Campaigns of Louis XIV', John A. Lynn (ed.), *Feeding Mars: Logistics in Western Warfare from the Middle Ages to the Present* (Boulder: Westview, 1993), pp. 137–61, 148–50; Kenneth Macksey, *For Want of a Nail: The Impact on War of Logistics and Communications* (London: Brassey's, 1989), p. 6.
- 46 On limitations of manoeuvre due to unitary army organization see Martin van Creveld, *Command in War* (Cambridge, MA: Harvard University Press, 1985), p. 58; Regling, 'Grundzüge', pp. 25, 77.
- 47 For Prussian reconnaissance and intelligence see Frederick to Field-Marshal Lehwaldt, 8 June 1757, Frederick, *Correspondenz*, XV, no. 9072; Frederick to the Duke of Brunswick-Bevern, 12 June 1757, Frederick, *Correspondenz*, XV, no. 9099; Frederick to the Prince of Anhalt-Dessau, 25 June 1757, Frederick, *Correspondenz*, XV, no. 9124; Frederick,

- Schriften*, p. 50. Also Creveld, *Command*, p. 58; Duffy, *Army*, pp. 145, 161–2; Duffy, *Military Life*, p. 326; Janson, *Winterfeldt*, pp. 41, 71, 98; Regling, ‘Grundzüge’, p. 77; Ritter, ‘Warfare’, p. 105.
- 48 For Frederick’s frustration with allied strategy see Frederick to the Duke of Brunswick-Bevern, 26 May 1757, Frederick, *Correspondenz*, XV, no. 8998; Lojewski, *Selbstbiographie*, II, p. 104. Also Childs, *Armies*, pp. 130–3; Duffy, *Military Life*, pp. 304, 312; Duffy, *Experience*, p. 95; R.R.Palmer, ‘Frederick the Great, Guibert, Bülow: From Dynastic to National War’, P.Paret (ed.), *Makers of Modern Strategy* (Oxford: Clarendon, 1991), pp. 91–122, 94.
- 49 On factors limiting the impact of battle see Michael Glover, *Warfare in the Age of Bonaparte* (London: Guild, 1980), p. 11; Robert S.Quimby, *The Background of Napoleonic Warfare: The Theory of Military Tactics in Eighteenth-Century France* (New York: Columbia University Press, 1957), p. 12; Regling, ‘Grundzüge’, pp. 51, 76; Ritter, ‘Warfare’, p. 111; Strachan, *Armies*, p. 15.
- 50 For the Prussian supply and transport system see Frederick to the Duke of Brunswick-Bevern, 12 May 1757, Frederick, *Correspondenz*, XV, no. 8933; Frederick to Field-Marshal Keith, 1 August 1757, Frederick, *Correspondenz*, XV, no. 9248; Lojewski, *Selbstbiographie*, I, p. 123. Also Duffy, *Army*, p. 136; Fiedler, *Kriegswesen*, p. 205; Janson, *Winterfeldt*, p. 326; Jany, *Armee*, II, p. 268; Martin Kiesling, *Geschichte der Organisation und Bekleidung des Trains der königlich-preussischen Armee: 1740–1888* (Berlin: Mittler, 1889), pp. 3, 6–9.
- 51 For limitations imposed by rear supply see Frederick to Field-Marshal Keith, 4 August 1757, Frederick, *Correspondenz*, XV, no. 9253; Frederick to Field-Marshal Keith, 8 August 1757, Frederick, *Correspondenz*, XV, no. 9263; Frederick, *Schriften*, p. 82; Frederick, *Testamente*, pp. 90, 95. Also Jeremy Black, ‘Eighteenth-Century Warfare Reconsidered’, *War in History*, Vol. I, No. 2 (1994), pp. 215–32, 215; David G.Chandler, *The Art of Warfare in the Age of Napoleon* (London: Batsford, 1976), p. 198; David G.Chandler, *Art of War in the Age of Marlborough*, 2nd edition (Turnbridge Wells: Spellmount, 1990), p. 197; Childs, *Armies*, pp. 110, 113, 141; Duffy, *Army*, pp. 59, 137, 162; Duffy, *Military Life*, pp. 89, 91; Duffy, *Experience*, p. 11; Glover, *Warfare*, p. 11; Jany, *Armee*, II, pp. 263–4; Luvaas, *Frederick*, p. 16; Lynn, ‘Food’, pp. 148–50; Macksey, *Logistics*, p. 6; Palmer, ‘Frederick’, p. 100; Regling, ‘Grundzüge’, pp. 60, 87, 116; Ritter, ‘Warfare’, pp. 105, 107–9; Strachan, *Armies*, p. 11.
- 52 For Frederick’s improvements of the supply system see Barsewisch, *Roszbach*, pp. 28, 64–5, 86, 285; Johann Jacob Dominicus, D.Kerler (ed.), *Aus dem Siebenjährigen Krieg: Tagebuch des preußischen Musketers Dominicus* (Munich: Beck, 1891), pp. 33–48; Frederick to the Margravine of Bayreuth, 3 May 1757, Frederick, *Correspondenz*, XV, no. 8899; Frederick to the Landgrave of Hesse-Cassel, 7 May 1757, Frederick, *Correspondenz*, XV, no. 8912; Frederick to the Duke of Brunswick-Bevern, 13 May 1757, Frederick, *Correspondenz*, XV, no. 8934; Frederick to Field-Marshal Keith, 29 April 1758, Frederick, *Correspondenz*, XVI, no. 9970; Frederick to General Dohna, 4 December 1758, Frederick, *Correspondenz*, XVII, no. 10582; Frederick, *Schriften*, p. 8; Frederick, *Testamente*, p. 96. Also Childs, *Armies*, pp. 159–60; Duffy, *Army*, pp. 176, 191; Duffy, *Military Life*, pp. 112, 145, 306; Jany, *Armee*, II, pp. 270–3; Janson, *Winterfeldt*, pp. 125, 277, 327; Lynn, ‘Food’, p. 146.
- 53 On the shortcomings of Prussian commanders and their causes see Duffy, *Army*, pp. 38–9, 54; Duffy, *Military Life*, pp. 182, 332–3; Duffy, *Experience*, pp. 140–2. Frederick must accept a fair share of responsibility for this state of affairs since he demanded the same degree of obedience from private to general.
- 54 On Frederick’s efforts to educate his officer corps see Jany, *Armee*, II, pp. 226, 230–1.
- 55 For the Prussian general staff see Frederick to Colonel Stutterheim, 4 March 1758, Frederick, *Correspondenz*, XVI, no. 9816; Frederick, *Testamente*, p. 99. Also Anderson, *War*, pp. 176–7; Duffy, *Military Life*, p. 82; Duffy, *Experience*, pp. 178–9; Walter Görlitz, *Der Deutsche Generalstab: Geschichte und Gestalt, 1657–1945* (Frankfurt: Frankfurter Hefte, 1950), pp.

- 17–18; Janson, *Winterfeldt*, pp. 54–5, 58, 62, 72, 80, 106–7, 110–12, 141, 158–66, 172–3, 230–1, 237, 272–3, 282–8, 312–17; Jany, *Armee*, II, pp. 198, 203, 208.
- 56 Considering the value of trained soldiers, it is strange that efforts to save their lives by improving medical services were very limited. On medical services see Duffy, *Experience*, p. 95; Kiesling, *Geschichte*, pp. 6–8.
- 57 For Prussian tactics and its limitations see Royal Councillor Eichel to Minister Podewils, 21 June 1757, Frederick, *Correspondenz*, XV, no. 9111; Henry Humphrey Evans Lloyd, *Des Herrn General von Lloyds Abhandlung über die allgemeinen Grundsätze der Kriegskunst*, trans. by H.Flensberg (Frankfurt: Perrenon, 1783), pp. 23, 28. Also Black, *Warfare*, p. 15; Duffy, *Experience*, pp. 189, 200, 232; Glover, *Warfare*, p. 11; Janson, *Winterfeldt*, p. 43; Jany, *Armee*, II, pp. 257, 305, 315; Luvaas, *Frederick*, p. 13; Palmer, 'Frederick', p. 94; Quimby, *Background*, p. 12; Regling, 'Grundzüge', p. 50; Ritter, 'Warfare', p. 109; Showalter, *Frederick*, p. 153; Strachan, *Armies*, p. 15.
- 58 For the limitations of pursuit see Barsewisch, *Roszbach*, pp. 25–6; Frederick, *Schriften*, p. 82; Lloyd, *Abhandlung*, p. 28; Lojewski, *Selbstbiographie*, II, pp. 146–7. Also Black, *Warfare*, pp. 63, 75; Black, 'Warfare Reconsidered', pp. 222–3; Childs, *Armies*, p. 71; Duffy, *Army*, p. 179; Duffy, *Military Life*, p. 154; Fiedler, *Grundriß*, I, pp. 176–8; Fiedler, *Kriegswesen*, p. 280; Regling, 'Grundzüge', pp. 50, 116; Ritter, *Warfare*, p. 109; Weigley, *Battles*, p. xv.
- 59 For Prussian tactical improvements and exercises see Barsewisch, *Roszbach*, pp. 39, 42; Bräker, *Tockenburg*, pp. 118–19. Also Black, *Warfare*, p. 61; Duffy, *Military Life*, pp. 141, 151, 169, 185, 308, 316; Fiedler, *Kriegswesen*, p. 289; Janson, *Winterfeldt*, p. 147; Regling, 'Grundzüge', pp. 48–9.
- 60 For the use of divisions by Prince Henry and Brunswick see Gerhard Johann David von Scharnhorst, U.von Gersdorff (ed.), *Gerhard von Scharnhorst: Ausgewählte Schriften* (Osnabrück: Biblio, 1983), pp. 144–5. Also C.V.Easum, *Prinz Heinrich von Preußen: Bruder Friedrichs des Großen*, trans. K.Dockhorn (Göttingen: Musterschmidt, 1958), pp. 309–12; Fiedler, *Kriegswesen*, p. 291; Petter, 'Kriegskunst', p. 246.
- 61 On problems of coalition warfare see Jeremy Black, *From Louis XIV to Napoleon: The Fate of a Great Power* (London: UCL, 1999), p. 14; Duffy, *Experience*, p. 152; Kennett, *Army*, p. 46; Kunisch, 'Allianz', pp. 81–8; Schieder, *Friedrich*, pp. 173, 177; Wilson, *Armies*, pp. 263–70, 275.
- 62 For campaign plans see Frederick, *Werke*, VI, p. 125. Also Black, 'Warfare Reconsidered', p. 231; Childs, *Armies*, p. 25; Christopher Duffy, *The Fortress in the Age of Vauban and Frederick the Great: 1660–1789* (London: Routledge, 1985), pp. 116–17; Duffy, *Experience*, p. 12; Kennett, *Army*, pp. 39–1; Kunisch, 'Allianz', pp. 85–8; Papke, 'Heer', p. 189; Regling, 'Gnmdzüge', p. 15.
- 63 For French mobilization see Jacques Antoine Hyppolyte de Guibert, 'Essai générale de Tactique', M.Ménard (ed.), *Écrits Militaires, 1772–1790, par le Comte de Guibert* (Paris: Copernic, 1977), pp. 49–243, 101. Also Black, *Napoleon*, p. 14; Duffy, *Army*, p. 19; Kennett, *Army*, pp. x, xiii, 9, 78–9; Kroener, 'Wirtschaft', pp. 162–3; Palmer, 'Frederick', p. 92; Williams, *Europe*, p. 6.
- 64 On French economic policy see James C.Riley, *The Seven Years' War and the Old Regime in France: The Economic and Financial Toll* (Princeton: Princeton University Press, 1986), p. 226; Trebilcock, *Industrialization*, pp. 112–15.
- 65 On the relation between king and nobility see Fiedler, *Kriegswesen*, p. 40; Kennett, *Army*, pp. 64, 88–9, 95; Williams, *Europe*, pp. 6, 12.
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- 67 Kennett, *Army*, p. 97.
- 68 For the shortcomings of the French officer corps see Pierre Joseph de Bourcet, G.P.F.Moisson de Vaux (ed.), *Mémoires Historiques sur la Guerre que les Francois ont soutenue en Allemagne depuis 1757 jusqu' en 1762* (Paris: Maradan, 1792), 3 vols, I, p. xv;

- Jean Baptiste Antoine Marcellin de Marbot, *The Memoirs of Baron de Marbot*, trans. A.J. Butler, 4th edition (London: Longmans, 1893), p. 2; Auguste Frédéric Louis Viesse de Marmont, *Mémoires du Duc de Raguse de 1792 à 1832* (Paris: Perrotin, 1857), 9 vols, I, pp. 9, 13. Also Anderson, *War*, pp. 179, 198; Black, *Napoleon*, p. 218; Childs, *Armies*, pp. 85, 97; Fiedler, *Kriegswesen*, p. 43; Kennett, *Army*, pp. 16, 28, 32, 57–9, 62, 67; Bernhard R. Kroener (ed.), ‘Militärischer Professionalismus und soziale Karriere: Der französische Adel in den europäischen Kriegen, 1740–1763’, *Europa im Zeitalter Friedrichs des Grossen* (München: Oldenbourg, 1989), pp. 99–133, 121–4; Léonard, *Armée*, p. 60; Williams, *Europe*, pp. 195–200. Saxe had criticized the officer corps for its lack of professionalism already in the 1730s. See Saxe, ‘Reveries’, pp. 106–7.
- 69 On intrigues and infighting see Guibert, ‘Essai’, pp. 6, 8, 12. Also Duffy, *Experience*, pp. 142–4; Kennett, *Army*, pp. xii, 36, 138; Kroener, ‘Professionalismus’, p. 124.
- 70 On the role of French pressure groups see Williams, *Europe*, pp. 12, 15.
- 71 For French morale see Jaques de Mercoyrol de Beaulieu, A. Le Sourd (ed.), *Campagnes de Jaques de Mercoyrol de Beulieu* (Paris: Renouard, 1915), pp. 406–7. Also Childs, *Armies*, p. 51; André Corvisier, *L’Armée Française de la Fin du XVIIe Siècle au Ministère de Choiseul: Le Soldat* (Paris: Presses Universitaires de France, 1964), 2 vols, I, pp. 98, 113–14, 331, 334, 338, 341, 355–6, II, p. 852; Duffy, *Experience*, pp. 298–9; Kennett, *Army*, pp. 73, 75, 87; Palmer, ‘Frederick’, p. 93; Williams, *Europe*, p. 2.
- 72 For the impact of internal strife on the conduct of campaigns see Mouffle de Angerville, *Vie Privée de Louis XV* (London: Lyton, 1788), 4 vols, III, p. 131. Also Fiedler, *Kriegswesen*, p. 50; Kennett, *Army*, pp. xv–xvi, 18, 20–1, 25; Regling, ‘Grundzüge’, pp. 19–20; Strachan, *Armies*, p. 9.
- 73 For French supply and baggage see Bourcet, *Mémoires*, I, pp. 243–4; Broglie, ‘Reglement pour les Équipages’, Anon., *Campagnes du Marechal Duc de Broglie: 1759–1761* (Leipzig: no publisher, 1761), Annex, pp. 43–4; Lloyd, *Abhandlung*, p. 54; Chevalier de Ray, L. Mouillard (ed.), *Reflexions et Souvenirs du Chevalier de Ray* (Paris: Charles-Lavauzelle, 1895), p. 196. Also Childs, *Armies*, p. 112; Duffy, *Fortress*, pp. 116–17; Duffy, *Experience*, pp. 86, 164; Kennett, *Army*, pp. 32–3, 101–4, 106, 110–11, 122; Gunther E. Rothenberg, *The Art of Warfare in the Age of Napoleon* (Staplehurst: Spellmount, 1997), pp. 13–14; Weigley, *Battles*, p. 261.
- 74 On privilege and tradition see Corvisier, *Armée*, II, p. 895; Kennett, *Army*, pp. 37, 63. For French reconnaissance see Ray, *Reflexions*, pp. 122–3, 165–6. Also Kennett, *Army*, pp. 49, 53.
- 75 See endnote no. 79.
- 76 On French tactical shortcomings see Childs, *Armies*, pp. 62–3; Corvisier, *Armée*, I, pp. 130–1; Kennett, *Army*, pp. 29, 35, 37, 55, 125; Kroener, ‘Professionalismus’, p. 121; Quimby, *Background*, p. 14.
- 77 Blanning, for instance, confuses the use and organization of de Broglie’s divisions with those of a later period. See T.C.W. Blanning, *The French Revolutionary Wars: 1787–1802* (London: Arnold, 1996), p. 18.
- 78 For the divisional system see Broglie, ‘Instruction pour la Cavalerie’, Anon., *Campagnes*, Annex, pp. 5–17; Broglie, ‘Instruction pour l’Infanterie’, Anon., *Campagnes*, Annex, pp. 4–5, 17–18, 26–7.
- 79 For Frederick’s terminology see Frederick, *Schriften*, pp. 233–310.
- 80 Frederick, *Schriften*, p. 304.
- 81 Frederick, *Schriften*, pp. 334, 336; Frederick, *Werke*, VI, p. 124.
- 82 For Frederick’s view on tactics see Frederick, *Werke*, VI, pp. 121–2, 297.
- 83 Frederick, *Schriften*, p. 205; Frederick, *Werke*, VI, p. 314.
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- 86 For Lloyd's terminology see Lloyd, *Abhandlung*, pp. iv, vii, x. For Silva's terminology see M.de Silva, *Pensées sur la Tactique, et la Stratégique* (Turin: Imprimerie Royale, 1778), p. 7.
- 87 For ideas on the militarization of the train see Lloyd, *Abhandlung*, p. 54; Silva, *Pensées*, pp. 266–7. On the line of operations see Lloyd, *Abhandlung*, pp. 4, 115–18, 121–3, 126.
- 88 Lloyd, *Abhandlung*, p. 28; Silva, *Pensées*, pp. 1–7.
- 89 Lloyd, *Abhandlung*, pp. vii, 17, 29–35.
- 90 *Ibid.*, pp. 26, 50–1.
- 91 *Ibid.*, p. v.
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- 93 Lloyd, *Abhandlung*, pp. 58–72; Silva, *Pensées*, pp. 7, 330, 334.
- 94 Silva, *Pensées*, pp. 28–9.
- 95 Frederick had already demonstrated this aspect of the multi-column advance in 1757.
- 96 Pierre Joseph de Bourcet, Ministry of War (ed.), *Principes de la Guerre de Montagnes* (Paris: Imprimerie Nationale, 1888), pp. 61–8, 88, 97, 100, 127.
- 97 For Bourcet's views on the general staff see Bourcet, *Principes*, pp. 55–60. For his views on signals see Bourcet, *Principes*, p. 72.
- 98 Jaques Antoine Hyppolyte de Guibert, *Défense du Système de Guerre Moderne* (Neufchatel: no publisher, 1779), 2 vols, I, pp. 12–13, II, pp. 1, 58, 143, 174; Guibert, 'Essai', pp. 167–8.
- 99 Guibert, 'Essai', pp. 169–70, 172–8.
- 100 *Ibid.*, pp. 150, 160–2, 190, 212–13, 229, 232–3, 236–7.
- 101 *Ibid.*, pp. 149, 151–3.
- 102 '*Les mouvements, par lesquels l'armée passe de l'ordre de marche à l'ordre de bataille, sont tellement liés aux combinaisons de l'ordre de marche, qu'on doit les regarder comme une seule et même operation*' Guibert, 'Essai', pp. 174, 178.
- 103 For Guibert's views on tactics see Guibert, 'Essai', pp. 110–12, 127, 130–1, 138–40, 144, 154–9, 162–5, 178–80, 195.
- 104 Guibert, 'Essai', pp. 100–1, 187, 213.
- 105 *Ibid.*, pp. 107–8, 150, 192–3, 213.
- 106 *Ibid.*, pp. 175–6, 190, 193, 196–7, 220–3, 234.
- 107 *Ibid.*, pp. 105, 107.
- 108 On Turgot's ideas see Keith Michael Baker, *Inventing the French Revolution: Essays on French Political Culture in the Eighteenth Century* (Cambridge: Cambridge University Press, 1990), pp. 120–1; Douglas Dakin, *Turgot and the Ancien Régime in France* (London: Methuen, 1939), pp. 274–8. On the Bourbon reforms see Dakin, *Turgot*, pp. 233–46; P.M.Jones, *Reform and Revolution in France: The Politics of Transition, 1774–1791* (Cambridge: Cambridge University Press, 1995), pp. 7–10, 239–41; Michael Kwass, *Privilege and the Politics of Taxation in Eighteenth-Century France* (Cambridge: Cambridge University Press, 2000), pp. 312–15; Hans Rosenberg, *Bureaucracy, Aristocracy and Autocracy: The Prussian Experience, 1660–1815* (Cambridge, MA: Harvard University Press, 1958), p. 203. On the relationship between Absolutism and Enlightenment see Peter H.Wilson, *Absolutism in Central Europe* (London: Routledge, 2000), pp. 110–13.
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- 112 Anderson, *War*, p. 197.
- 113 For the opposition against the reforms see Guibert, ‘Essai’, pp. 192, 196–7. Also Kennett, *Army*, p. 140; Kroener, ‘Professionalismus’, pp. 108, 112; Léonard, *Armée*, pp. 239, 250, 290.
- 114 ‘*Ni chiens, ni filles, ni soldats*’, quoted in Corvisier, *Armée*, I, p. 92.
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- 117 On Gribeauval’s reforms see Jean Colin, *L’Éducation Militaire de Napoléon* (Paris: Chapelot, 1901), pp. 73–7.
- 118 On the introduction of the *ordre mixte* see Quimby, *Background*; Regling, ‘Grundzüge’, p. 256.
- 119 On divisional organization see Duffy, *Experience*, p. 182; Regling, ‘Grundzüge’, p. 175; Weigley, *Battles*, p. 265.
- 120 On Prussian reforms see Black, *Warfare*, p. 149; Duffy, *Military Life*, p. 245; Regling, ‘Grundzüge’, pp. 151–3.
- 121 For the general staff see Barsewisch, *Rossbach*, p. 197; Frederick, *Testamente*, pp. 156–7. Also Görlitz, *Generalstab*, pp. 18–19; Jany, *Armee*, III, pp. 38, 45–6, 66; Ulrich Marwitz, ‘Friedrich der Große als Feldherr’, Militärgeschichtliches Forschungsamt (ed.), *Vorträge zur Militärgeschichte* (Bonn: Mittler, 1987), Vol. VIII, pp. 73–93, 85.
- 122 From 2.45 guns per 1,000 men at Mollwitz, and 2.85 guns per 1,000 men at Chotusitz. See Chandler, *Marlborough*, pp. 149–50.
- 123 On the Potato War see Duffy, *Military Life*, pp. 271–4, 277.
- 124 On Prussian artillery see Anderson, *War*, p. 182; Jany, *Armee*, III, pp. 79–80, 96; Regling, ‘Grundzüge’, p. 171; Weigley, *Battles*, p. 271.
- 125 On the reform of the light infantry see Jany, *Armee*, III, pp. 82, 85–6, 90; Regling, ‘Grundzüge’, pp. 159, 170.
- 126 On the composition of the officer corps see Duffy, *Army*, pp. 199–201; Jany, *Armee*, III, pp. 47–8.
- 127 On army and society in the inter-war years see Büsch, *Sozialleben*, pp. 144–54; Duffy, *Military Life*, pp. 245, 247; Jany, *Armee*, III, pp. 5–8, 55, 59; Williams, *Europe*, p. 362.
- 128 For discipline and morale see Klöden, *Berlin*, pp. 50, 53, 58–9; Friedrich Christian Laukhard, V. Petersen (ed.), *Magister Laukhards Leben und Schicksale* (Stuttgart: Lutz, 1908), 2 vols, I, pp. 255–6, 269, 309. For the official attitudes towards leadership and discipline see Prussia, *Reglement für die königlich-preußische Infanterie* (Berlin: Decker, 1788), pp. 200, 670; Georg von Wissel, *Der Jäger im Eelde oder kurze Abhandlung wie der Dienst der leichten Truppen im Eelde zu verrichten* (Göttingen: Dieterich, 1784), pp. 149–50, 168.
- 129 For the Holland campaign see Boyen, *Erinnerungen*, I, pp. 34, 97. Also Black, *Warfare*, p. 83; Rothenberg, *Warfare*, p. 12.
- 130 In this work, an officer corps is considered professional if its members receive a thorough training, are promoted according to merit or seniority and identify themselves with their profession.



## 2

## MILITARY THEORY AND PRACTICE: 1792–1806

- 1 The chapter will concentrate on the early years of the Wars of the French Revolution since Prussia had left the war by 1795.
- 2 On the secret agendas of the factions see Jean-Paul Bertaud, *La Révolution Armée: Les Soldats-Citoyens et la Révolution Française* (Paris: Laffont, 1979), pp. 73–6; Black, *Napoleon*, pp. 160–2; Brinton, *Revolution*, pp. 20, 28, 56; Steven T. Ross, *European Diplomatic History: 1789–1815* (New York: Doubleday, 1969), pp. 39–42, 45; Steven T. Ross, *Quest for Victory: French Military Strategy, 1792–1799* (New York: Barnes, 1978), pp. 11, 40; Michael Wagner, ‘Revolution-skriege und revolutionäre Außenpolitik’, Rolf Reichardt (ed.), *Die Französische Revolution* (Würzburg: Ploetz, 1988), pp. 114–31, 116–17.
- 3 This change of policy is most clearly expressed in a memorandum by Carnot in which he explicitly suggested the change of war aims from liberation to exploitation and security. See Carnot to the Committee of Public Safety, 14 July 1794, Lazare Nicolas Marguerite Carnot, E. Charavay (ed.), *Correspondance Générale de Carnot* (Paris: Imprimerie Nationale, 1892–1907), 4 vols, IV, pp. 496–502. Similar views in the Committee of Public Safety to the representatives with the Army of the North and the Army of the Sambre and Meuse, 20 July 1794, CC, V, p. 513. Also Ross, *Victory*, p. 10. Schroeder argues that the war was motivated by traditional Austro-French rivalry in the Low Countries right from the start. See Paul W. Schroeder, *The Transformation of European Politics: 1763–1848* (Oxford: Clarendon Press, 1994), pp. 100, 102.
- 4 The spirit of national war was apparent to contemporaries. See Louis Joseph Bricard, J. Bricard (ed.), *Journal du Cannonier Bricard: 1792–1802*, 2nd edition (Paris: Delagrave, 1891), pp. 1, 17; Laurent de Gouvion Saint Cyr, *Mémoires sur les Campagnes des Armées du Rhin et de Rhin-et-Moselle, de 1792 jusqu’ à la Paix de Campo-Formio* (Paris: Anselin, 1829), 4 vols, I, pp. lviii, lx, lxxxi; Laukhard, *Leben*, II, pp. 37–8. Also see Carnot’s exuberant letters: Carnot to the National Assembly, 6 August 1792, CC, I, pp. 10–23; Carnot to the National Assembly, 17 August 1792, CC, I, p. 32.
- 5 On French war aims see Blanning, *Wars*, pp. 91–3; Brinton, *Revolution*, pp. 55, 57, 84–5, 164–7; Florence Gauthier, ‘Universal Rights and National Interest in the French Revolution’, Otto Dann and John Dinwiddy (eds), *Nationalism in the Age of the French Revolution* (London: Hambledon Press, 1988), pp. 27–39, 27, 30, 34–5; Ross, *History*, pp. 61–4, 67, 85–6, 194–5.
- 6 On the seizure of power by the radicals see Brinton, *Revolution*, pp. 114–16; Ross, *History*, p. 72; Ross, *Victory*, pp. 43, 55, 58.
- 7 On the link between the annihilation of domestic and foreign enemies see Bertaud, *Révolution*, pp. 110–11.
- 8 Jean Pierre Dellard, *Mémoires Militaires du Général Baron Dellard sur les Guerres de la République et de l’Empire* (Paris: Librairie Illustrée, 1892), pp. 41–2; Decree, 9 October 1792, Jean Baptiste Duvergier (ed.), *Collection Complete des Lois, Décrets, Ordonnances, Réglements, Avis du Conseil-d’ État* (Paris: Guyot, 1834), 85 vols, V, p. 16. Massacres of prisoners were also conducted by British troops on the express command of the Duke of Cumberland. See Scharnhorst to his wife, 25 July 1793, Gerhard Johann David von Scharnhorst, K. Linnebach (ed.), *Scharnhorsts Briefe* (München: Müller, 1914), p. 58.
- 9 For Carnot’s demands to annihilate the enemy by superior manoeuvre and pursuit see Carnot, ‘Système Général des Opérations Militaires de la Campagne Prochaine’, 2 February 1794, CC, IV, pp. 279–83; Carnot to General Charbonié, 4 May 1794, CC, IV, p. 345; Carnot to Jourdan, 27 May 1794, CC, IV, pp. 383–4; Carnot to Representative Richard, 8 July 1794, CC, IV, p. 470; Carnot to Representatives Guyton and Gillet, 10 July 1794, CC, IV, p. 474;

- Carnot to the representatives with the Army of the Rhine and the Army of the Moselle, 13 July 1794, *CC*, IV, p. 487.
- 10 On the policies and war aims of the allies and their impact on the conduct of war see Brinton, *Revolution*, p. 98; Ross, *History*, pp. 32–5, 44–8, 50, 56–9, 65–9, 87–8, 91, 97–9, 109, 149–50, 177–9, 188, 192, 208–11; Wilson, *Armies*, pp. 303–4, 340.
  - 11 Brunswick's invasion force, for instance, amounted to a mere quarter of Prussian army strength, whereas the Austrians contributed no more than a third of their army in 1792–1793. See Ross, *History*, p. 51.
  - 12 The distinguishing feature of a battle of annihilation is the complete or almost complete destruction of an enemy army as a fighting force. This kind of battle may or may not be decisive, depending mainly on the size of the army destroyed.
  - 13 On total mobilization see T.C.W. Blanning, *The French Revolution in Germany: Occupation and Resistance in the Rhineland, 1792–1802* (Oxford: Clarendon, 1983), p. 131; Blanning, *Wars*, p. 82; Palmer, 'Frederick', p. 92. On the link between the centralization of power in the Committee of Public Safety and the war effort see Brinton, *Revolution*, pp. 94, 129; Ross, *History*, pp. 73–5, 82–5; Wilson, *Armies*, p. 315. Alder and Brown give examples of continued inefficiency due to group interest and political interference. See Ken Alder, *Engineering the Revolution: Arms and Enlightenment in France, 1763–1815* (Princeton: Princeton University Press, 1997), p. 345; Brown, Howard G., *War, Revolution, and the Bureaucratic State: Politics and Army Administration in France, 1791–1799* (Oxford: Clarendon Press, 1995), pp. 9–11.
  - 14 On *département* organization see Brinton, *Revolution*, pp. 43, 45.
  - 15 For examples of the command economy see Order, Carnot, 1 August 1793, *CC*, II, p. 434; Decree, 22 December 1792, *DC*, V, p. 93; Decree, 2 April 1793, *DC*, V, p. 217; Decree, 4 May 1793, *DC*, V, pp. 267–8; Decree, 5 July 1793, *DC*, VI, p. 4; Decree, 7 July 1793, *DC*, VI, p. 7; Decree, 28 July 1793, *DC*, VI, pp. 55–6; Decree, 11 September 1793, *DC*, VI, pp. 159–63. Also Ross, *Victory*, pp. 64–5.
  - 16 On differences between Montagnards, Girondins and the Directory in economic policy and the war effort see Brinton, *Revolution*, pp. 110, 135–6, 219–21; Gerd van den Heuvel, 'Revolutionäre Wirtschafts- und Sozialpolitik', Rolf Reichardt (ed.), *Die Französische Revolution* (Würzburg: Ploetz, 1988), pp. 146–60.
  - 17 See Jean Robiquet, *Daily Life in France under Napoleon*, trans. V.M. Macdonald (London: Allen & Unwin, 1962), pp. 14–15. For the economic costs of the war effort see Carnot to the representatives with the Army of the North, 8 July 1793, *CC*, II, p. 381; Carnot to the Committee of Public Safety, 9 July 1793, *CC*, II, p. 387; Representative Duboe to Carnot, 6 September 1794, *CC*, IV, p. 643; Commissary Hausmann to Gouvion Saint Cyr, 5 August 1796, Gouvion Saint Cyr, *Mémoires*, III, p. 396. Also Brinton, *Revolution*, pp. 132–5, 204–5.
  - 18 For arms production see Bouchotte to Hoche, 10 November 1793, *CC*, IV, p. 76; Carnot to Jourdan, 11 November 1793, *CC*, IV, p. 79; Hoche to Bouchotte, 21 November 1793, *CC*, IV, p. 154; Carnot to the Mayor of Paris, 26 November 1793, *CC*, IV, p. 180; Carnot to Representative Pointe, 30 November 1793, *CC*, IV, p. 217; Carnot to Manufacturer Kobiersky, 5 December 1793, *CC*, IV, pp. 229–30; Carnot to Representative Pointe, 7 December 1793, *CC*, IV, p. 235; Carnot to Hoche, 11 December 1793, *CC*, IV, p. 239; Carnot to General Ferrand, 18 January 1794, *CC*, IV, p. 269; Decree, 8 October 1792, *DC*, V, p. 14; Decree, 11 October 1792, *DC*, V, p. 17; Decree, 14 October 1792, *DC*, V, p. 20; Decree, 12 February 1793, *DC*, V, p. 145; Decree, 24 February 1793, *DC*, V, p. 170; Decree, 24 February 1793, *DC*, V, p. 171; Decree, 10 March 1793, *DC*, V, p. 173; Decree, 16 March 1793, *DC*, V, pp. 192–3; Decree, 18 March 1793, *DC*, V, p. 198; Decree, 25 March 1793, *DC*, V, p. 206; Decree, 5 June 1793, *DC*, V, p. 315.
  - 19 For stopgap measures see Carnot to the National Assembly, 6 August 1792, *CC*, I, p. 16; Carnot to the National Assembly, 22 August 1792, *CC*, I, p. 69; Jourdan to the Committee of

- Public Safety, 8 November 1793, *CC*, IV, p. 53; Decree, 30 March 1793, *DC*, V, p. 216; Decree, 14 June 1793, *DC*, V, p. 343.
- 20 On populist fiscal and economic policies see Brinton, *Revolution*, pp. 23, 46–8, 131–2, 220; Trebilcock, *Industrialization*, pp. 133–8; Jean Tulard, *La Vie Quotidienne des Français sous Napoléon* (Paris: Hachette, 1978), pp. 22–3, 29, 43.
- 21 For recruitment policy and the composition of the levies see Carnot to the Committee of Public Safety, 9 July 1793, *CC*, II, pp. 386–7; Carnot to the Committee of Public Safety, 13 July 1793, *CC*, II, p. 401; Decree, 24 February 1793, *DC*, V, pp. 169–70; Decree, 18 March 1793, *DC*, V, p. 198; Decree, 25 March 1793, *DC*, V, p. 210; Decree, 23 August 1793, *DC*, VI, pp. 107–8; Gouvion Saint Cyr, *Mémoires*, I, p. xxxvii; Joliclerc to his mother, 30 May 1793, Francois Xavier Joliclerc, E.Joliclerc (ed.), *Volontaire aux Armées de la Révolution: Ses Lettres 1793–1796* (Paris: Perrin, 1905), p. 168. Also Bertaud, *Révolution*, pp. 65–71, 80–2, 115–37; Alan Forrest, *Conscripts and Deserters: The Army and French Society during the Revolution and Empire* (Oxford: Oxford University Press, 1989), pp. 34–5; John A.Lynn, *The Bayonets of the Republic* (Chicago: University of Illinois Press, 1984), pp. 50–7, 60; Samuel F.Scott, *The Response of the Royal Army to the French Revolution: The Role and Development of the Line Army, 1787–93* (Oxford: Clarendon, 1978), p. 187; Carl von Zimmermann, ‘Milizheere: Die französischen Freiwilligen von 1791 bis 1794’, *Vierteljahreshefte für Truppenführung und Heereskunde*, Vol. IX (1912), pp. 133–61.
- 22 On civil-military relations see Forrest, *Conscripts*.
- 23 Estimates differ: Forrest quotes a number of 750,000 men; Zimmermann calculated 947,000 by early 1794. Ross assumes an army strength of 1,075,600 for August 1794. See Forrest, *Conscripts*, p. 34; Ross, *History*, p. 80; Zimmermann, ‘Milizheere’, p. 155.
- 24 Marmont remembered demanding entry examinations at the artillery academy. See Marmont, *Mémoires*, I, pp. 16–18. Smith argues that the French nobility of the *ancien régime* had not been hostile towards the concept of merit but rather objected to anybody other than the king judging on their merit. See Jay M.Smith, *The Culture of Merit: Nobility, Royal Service, and the Making of Absolute Monarchy in France, 1600–1789* (Ann Arbor: University of Michigan Press, 1996), pp. 264, 274. It seems, however, that the nobility’s definition of merit differed from the revolutionary understanding as well.
- 25 For the composition of the officer corps see Bricard, *Journal*, p. 5; General Biron to the Ministry of War, 23 August 1792, *CC*, I, p. 82; Jourdan to Bouchotte, 26 November 1793, *CC*, IV, p. 184; Gouvion Saint Cyr, *Mémoires*, I, pp. xxxvii, xxxix, lxxxvi; Étienne Jacques Joseph Alexandre Macdonald, C.Rousset (ed.), *Recollections of Marshal Macdonald*, trans. S.L.Simeon (London: Bentley, 1892), 2 vols, I, p. 136; Marbot, *Memoirs*, p. 54. Also Scott, *Response*, pp. 192–7; Strachan, *Armies*, p. 38.
- 26 For the military use of science see Carnot to Jourdan, 4 November 1793, *CC*, IV, pp. 25–6; Carnot to the City of Paris, 19 November 1793, *CC*, IV, pp. 131–2; Carnot to the Society of Inventions, 30 December 1793, *CC*, IV, p. 257; Carnot to Professor Schouany, 18 August 1794, *CC*, IV, p. 594.
- 27 On the use of propaganda see Clive Emsley, ‘Nationalist Rhetoric and Nationalist Sentiment in Revolutionary France’, Otto Dann and John Dinwiddy (eds), *Nationalism in the Age of the French Revolution* (London: Hambledon Press, 1988), pp. 39–53, 42–3, 52.
- 28 For the French peasantry’s guerrilla warfare see August Freiherr Hiller von Gaertringen, W.von Unger (ed.), *Denkwürdigkeiten des Generals August Freiherrn Hiller von Gaertringen* (Berlin: Mittler, 1912), p. 46; Heinrich Carl Menu von Minutoli, *Militärische Erinnerungen aus dem Tagebuche des Generallieutenants von Minutoli* (Berlin: Reichardt, 1845), p. 124. For a comparison see instances of German and Belgian guerrilla warfare against plundering French in Jean Francois Boulart, *Mémoires Militaires du Général Baron Boulart sur les Guerres de La République de l’Empire* (Paris: Librairie Illustrée, no date), p. 24; Bricard, *Journal*, pp. 117–18, 198–9, 210, 232, 239, 245, 247; Victor Dupuy, C.A.Thoumas (ed.), *Souvenirs Militaires de Victor Dupuy: 1794–1816* (Paris: Lévy, 1892),

- pp. 5, 7; General Mangen to Gouvion Saint Cyr, 6 November 1795, Gouvion Saint Cyr, *Mémoires*, II, pp. 515–16; Jean Hardy, *Un Général de Sambre-et-Meuse: Mémoires Militaires du Général Jean Hardy, 1792–1802* (Paris: Baudoin, 1883), p. 196. French peasants only fought if their property was threatened. When Prussian troops behaved well and respected private property, the population was friendly. See Minutoli, *Erinnerungen*, p. 77.
- 29 For the enthusiasm of the early volunteers see Anon., *Briefe über den Feldzug von 1794* (Frankfurt: no publisher, 1795), p. 27; Carnot to the National Assembly, 6 August 1792, CC, I, pp. 10, 15, 17; General Biron to the Ministry of War, 23 August 1792, CC, I, p. 82; Gouvion Saint Cyr, *Mémoires*, I, p. xxxvii.
- 30 On the way to the Army of the North, Macdonald encountered thousands of volunteers who had thrown their arms away and were now fleeing with patriotic songs on their lips. See Macdonald, *Recollections*, I, p. 143. For the lack of steadiness of early revolutionary troops see Cognet to his parents, 30 September 1793, Cognet, Alfred Auguste Ernouf (ed.), *Souvenirs Militaires d'un Jeune Abbé* (Paris: Didier, 1881), p. 4; Gouvion Saint Cyr, *Mémoires*, I, pp. lxx, 59–60; Hiller, *Denkwürdigkeiten*, p. 49. Also Brinton, *Revolution*, p. 97.
- 31 For the problem of desertion and draft dodging see Jourdan to Bouchotte, 28 November 1793, CC, IV, p. 203; Carnot to General Vialle, 18 January 1794, CC, IV, p. 271; Carnot to the representatives, May 1794, CC, IV, p. 356; Gouvion Saint Cyr, *Mémoires*, I, p. 218; Moreau to Gouvion Saint Cyr, 5 December 1796, Gouvion Saint Cyr, *Mémoires*, IV, p. 276. For the declining motivation of the later levies see Joliclerc to his mother, 13 December 1793, Joliclerc, *Lettres*, p. 142; Michel Ney, *Memoirs of Marshal Ney* (London: Bull and Churton, 1833), 2 vols, I, p. 39.
- 32 Corvisier showed that the royal army was about as representative of the French population regarding social strata and regional origin as the army of conscription. See Corvisier, *Armée*, I, p. 542.
- 33 Delbrück, *Aufsätze*, pp. 237–9.
- 34 On the link between mass army and the divisional system see Georges Lefebvre, *Napoleon: 1799–1807*, trans. H.F. Stockhold (London: Routledge, 1969), p. 228.
- 35 On the link between economic predicament and conquest see Black, *Napoleon*, pp. 171–4; Blanning, *Wars*, pp. 160–2; Brinton, *Revolution*, pp. 219, 221; Alan Forrest, *The Soldiers of the French Revolution* (London: Duke University Press, 1990), pp. 4–5, 131. Paddy Griffith, *The Art of War of Revolutionary France: 1789–1802* (London: Greenhill, 1998), p. 60; Ross, *History*, p. 173. Contemporaries had discovered the causality as well. See Knesebeck, *Betrachtung über den jetzigen Krieg und die Ursachen seiner falschen Beurteilung* (Berlin: no publisher, 1794), p. 32; Vincke to Stein, 30 September 1808, Rudolf Vaupel (ed.), *Das preußische Heer vom Tilsiter Frieden bis zur Befreiung: 1807–1814* (Leipzig: Hirzel, 1938), p. 598.
- 36 On the changing nature and allegiance of the army see Forrest, *Soldiers*, pp. 5, 178, 197; Gauthier, 'Rights', p. 27.
- 37 For the popular discontent in France before Bonaparte's coup see Laukhard, *Leben*, II, p. 288; Marbot, *Memoirs*, pp. 18–19, 122, 480. Also Brinton, *Revolution*, pp. 142–8, 150, 156–7; Alan Forrest, *The French Revolution* (Oxford: Blackwell, 1995), pp. 57–62; Robiquet, *France*, pp. 13–23. For a defence of the Directory's achievements see Brinton, *Revolution*, pp. 221, 244; Ross, *History*, pp. 215–16.
- 38 For rear supply see Carnot to the National Assembly, 2 August 1792, CC, I, p. 5; Carnot to the Army of the North, 9 July 1793, CC, II, p. 389; Jourdan to the Committee of Public Safety, 6 November 1793, CC, IV, p. 40; Jourdan to the Committee of Public Safety, 16 November 1793, CC, IV, p. 116; Cognet to his parents, 4 June 1794, Cognet, *Souvenirs*, p. 42; Gouvion Saint Cyr, *Mémoires*, I, p. 5; Representative Joubert to the Committee of Public Safety, 15 October 1795, Ney, *Memoirs*, I, p. 384. For the lack of transport and the poor state

- of the roads see Jourdan to the Committee of Public Safety, 6 November 1793, *CC*, IV, p. 40; Captain Cordellier to the Committee of Public Safety, 11 November 1793, *CC*, IV, p. 83; Hoche to Bouchotte, 26 November 1793, *CC*, IV, p. 187; Moreau to Gouvion Saint Cyr, 27 May 1796, Gouvion Saint Cyr, *Mémoires*, III, p. 358; General Reynier to Gouvion Saint Cyr, 4 August 1797, Gouvion Saint Cyr, *Mémoires*, IV, p. 319; Representative Joubert to the Committee of Public Safety, 15 October 1795, Ney, *Memoirs*, I, p. 384. On French supply in general see Forrest, *Soldiers*, pp. 125–55.
- 39 For contributions and requisitions see Bricard, *Journal*, p. 129; Dellard, *Mémoires*, p. 77; Gouvion Saint Cyr to Moreau, 27 May 1796, Gouvion Saint Cyr, *Mémoires*, III, p. 359; Moreau to Jourdan, 30 July 1796, Gouvion Saint Cyr, *Mémoires*, III, p. 389; Gouvion Saint Cyr to Desaix, 21 February 1797, Gouvion Saint Cyr, *Mémoires*, IV, p. 302; General Ambert to Gouvion Saint Cyr, 17 April 1797, Gouvion Saint Cyr, *Mémoires*, IV, p. 316; Gouvion Saint Cyr, *Mémoires*, I, p. 3, III, p. 359; Jourdan to Kléber, 26 May 1796, Jean Baptiste Jourdan, *Mémoires pour servir à l'Histoire de la Campagne de 1796* (Paris: Magimel, 1818), p. 243; Directory to Moreau, 30 July 1796, Jourdan, *Mémoires*, p. 296.
- 40 For the official policy of contributions see Carnot to the representatives with the Army of the Moselle, 27 May 1794, *CC*, IV, p. 382; Carnot to the representatives with the Army of the North, 18 June 1794, *CC*, IV, p. 432; Carnot to Jourdan, 29 June 1794, *CC*, IV, pp. 450–1; Carnot to Jourdan, 29 June 1794, *CC*, IV, p. 451; Carnot to Jourdan, 3 July 1794, *CC*, IV, p. 459; Carnot to Pichegru, 12 July 1794, *CC*, IV, p. 481; Carnot to the representatives with the Army of the North and the Army of the Moselle, 14 July 1794, *CC*, IV, p. 491; Carnot to the representatives with the Army of the Rhine and Moselle, 18 July 1794, *CC*, IV, pp. 508–9; Carnot to the representatives with the Army of the Sambre and Meuse, 15 September 1797, Ney, *Memoirs*, I, pp. 376–8. For orders to create a strategic desert see Carnot to the representatives with the Army of the Moselle and the Army of the Rhine, 11 July 1794, *CC*, IV, pp. 478–9; Gouvion Saint Cyr, *Mémoires*, I, p. 6; Carnot to the representatives with the Army of the Sambre and Meuse, 21 September 1795, Ney, *Memoirs*, I, pp. 374–5.
- 41 For the importance of potatoes for supply see Bricard, *Journal*, pp. 11–13, 16, 26, 28. Also Gates, *Wars*, p. 8.
- 42 Generals were aware of this need for dispersal. See Moreau to Gouvion Saint Cyr, 27 May 1796, Gouvion Saint Cyr, *Mémoires*, III, p. 358; Jourdan and Moreau to the Directory, 7 May 1796, Jourdan, *Mémoires*, p. 232; Ney, *Memoirs*, I, pp. 47–8.
- 43 Troops bivouaced increasingly without tents. See Bricard, *Journal*, pp. 9, 20, 137, 152.
- 44 For French tactical inferiority see Anon., *Briefe*, p. 3; Gouvion Saint Cyr, *Mémoires*, I, p. xiv; Ludwig von Reiche, L. von Weltzien (ed.), *Memoiren des königlich preußischen Generals der Infanterie Ludwig von Reiche* (Leipzig: Brockhaus, 1857), pp. 88, 94; Gerhard Johann David von Scharnhorst, C. von der Goltz (ed.), *Militärische Schriften von Scharnhorst* (Berlin: Schneider, 1881), pp. 223–4. For casualty statistics see Griffith, *France*, p. 233.
- 45 It is vital not to confuse tactical skirmishing with operational skirmishing: operational skirmishing is the conduct of operations with considerable bodies of regular troops in broken country in order to avoid battle on open ground. The mode of combat used in operational skirmishing was the combination of tactical skirmishing, columns of attack and field fortifications.
- 46 This disadvantage was keenly felt. See Anon., *Briefe*, pp. 3, 18, 26, 61–2; Hiller, *Denkwürdigkeiten*, p. 60; Knesbeck, *Betrachtungen*, pp. 56, 65–6; Reiche, *Memoiren*, pp. 40, 57, 60, 67, 85–6; Scharnhorst, *Militärische Schriften*, pp. 215, 219, 224–6, 257–8. For the French view see Gouvion Saint Cyr, *Mémoires*, I, pp. 38–9, 53, 66.
- 47 For the combination of operational skirmishing with operational art see Macdonald, *Recollections*, I, pp. 138, 175.

- 48 For the necessity to detach for the protection of communications see Anon., *Briefe*, p. 37; Knessebeck, *Betrachtungen*, pp. 83, 96–7, 100; Scharnhorst, *Militärische Schriften*, pp. 217–18.
- 49 For the role of fortresses in the defence of France see Scharnhorst, *Ausgewählte Schriften*, p. 33. Fortresses offered the additional advantage of stopping any pursuit by allied troops when the French had lost a battle. Frederick had known this problem as well. After the defeat of Neerwinden, the French could retreat behind their fortresses to gain a respite. See Scharnhorst, *Militärische Schriften*, p. 218. For the combination of fortresses and operational skirmishing see Anon., *Briefe*, pp. 61–2.
- 50 Carnot's operational ideas are most concisely expressed in the 'Système Général des Opérations Militaires', 2 February 1794, *CC*, IV, pp. 279–83.
- 51 Gouvion Saint Cyr, *Mémoires*, I, Annex, Table no. 9.
- 52 Carnot to Michaud, 27 May 1794, *CC*, IV, p. 386. Also Macdonald, *Recollections*, I, p. 167.
- 53 Carnot's orders often violated his own principle of concentration of effort. See Carnot to the representatives with the Army of the North, 4 May 1794, *CC*, IV, pp. 343–4; Carnot to the representatives with the Army of the North, 26 June 1794, *CC*, IV, p. 446; Carnot to Jourdan, 4 July 1794, *CC*, IV, pp. 463–4; Carnot to Representatives Lacombe and Saint Michel, 4 July 1794, *CC*, IV, p. 465; Carnot to Jourdan, 20 June 1796, Jourdan, *Mémoires*, pp. 389–90.
- 54 Directory to Moreau, 30 July 1796, Jourdan, *Mémoires*, pp. 295–9.
- 55 Theatre command went to Pichegru in 1794–1795, to Moreau in 1795–1796, and to Augereau in 1797. For complaints about Carnot's interference see Jourdan and Moreau to Directory, 7 May 1796, Jourdan, *Mémoires*, pp. 232–8.
- 56 For the representatives' range of powers see Carnot to General Biron, 23 August 1792, *CC*, I, p. 80; Decree, 9 April 1793, *DC*, V, p. 243; Decree, 23 August 1793, *DC*, VI, p. 107.
- 57 For denunciations see Bricard, *Journal*, p. 101; Gouvion Saint Cyr, *Mémoires*, I, pp. 136–7; Macdonald, *Recollections*, I, p. 164. Carnot had to caution representatives not to take all denunciations at face value. See Carnot to Saint Just and Le Bas, 25 May 1794, *CC*, IV, p. 377.
- 58 The National Assembly to the representatives, 26 August 1792, *CC*, I, p. 93.
- 59 Biron to Carnot, 22 August 1792, *CC*, I, p. 78. For the purges of the officer corps see Boulart, *Mémoires*, p. 8; Carnot to Saint Just and Le Bas, 14 November 1793, *CC*, IV, p. 100; Gouvion Saint Cyr, *Mémoires*, I, p. 71; Jourdan, *Mémoires*, p. 7; Macdonald, *Recollections*, I, pp. 156, 159, 166; Ney, *Memoirs*, I, pp. 41–2.
- 60 For Bouchotte's attitudes see Bouchotte to Carnot, 14 November 1793, *CC*, IV, p. 102; Pichegru to Bouchotte, 15 November 1793, *CC*, IV, p. 111.
- 61 Carnot to the representatives with the Army of the North, 10 April 1794, *CC*, IV, p. 326; Carnot to Representative Garrau, 16 May 1794, *CC*, IV, pp. 364–5.
- 62 Decree, 7 April 1793, *DC*, V, p. 239. For complaints see General Biron to the Minister of War, 25 August 1792, *CC*, I, pp. 90–1; Hoche to Bouchotte, 5 November 1793, *CC*, IV, p. 33; officers, non-commissioned officers and dragoons of the 11th Regiment to the Committee of Public Safety, 28 November 1793, *CC*, IV, pp. 206–7; General Biron to the Minister of War, 23 August 1792, *CC*, I, p. 83; General Hoche to Bouchotte, 14 November 1793, *CC*, IV, pp. 103–4; Gouvion Saint Cyr, *Mémoires*, I, pp. 31, 60, 92. Nonetheless, allied observers believed that French staff work was superior to their own. See Anon., *Briefe*, pp. 19–21; Knessebeck, *Betrachtungen*, pp. 42–4; Scharnhorst, *Militärische Schriften*, pp. 221–2.
- 63 Bricard, *Journal*, p. 76; General Biron to the Ministry of War, 23 August 1792, *CC*, I, p. 82; Gouvion Saint Cyr, *Mémoires*, I, p. xlvi; Marmont to his father, 4 July 1793, Marmont, *Mémoires*, I, pp. 97–8; Marmont, *Mémoires*, I, p. 52. Representatives were so successful in undermining the trust of troops in their superiors that the cry '*Nous sommes trahis*' could still be heard in May 1940.

- 64 This observation had already been made by contemporary observers. See Knesebeck, *Betrachtungen*, p. 78.
- 65 General Launay to the Committee of Public Safety, 9 November 1793, *CC*, IV, p. 64; Gouvion Saint Cyr, *Mémoires*, I, pp. 91, 109; Macdonald, *Recollections*, I, p. 137.
- 66 General Turreau to Ronsin, 8 November 1793, *CC*, IV, p. 59; Ney, *Memoirs*, I, pp. 41–2.
- 67 Carnot to the representatives with the army of the Moselle, 27 April 1794, *CC*, IV, p. 337; Carnot to Saint Just and Le Bas, 2 May 1794, *CC*, IV, p. 341.
- 68 General Turreau to Ronsin, 8 November 1793, *CC*, IV, p. 59. For tensions between representatives and commanders see Laukhard, *Leben*, II, p. 154. Sometimes, complete units complained about representatives. See, for instance, 8th Battalion of Sambre and Meuse to the Committee of Public Safety, 22 November 1793, *CC*, IV, p. 160. For examples of good cooperation see Macdonald, *Recollections*, I, p. 175; Ney, *Memoirs*, I, p. 43; Representative Joubert to the Committee of Public Safety, 15 October 1795, Jourdan, *Mémoires*, pp. 376–8.
- 69 Order, Carnot, 9 July 1793, *CC*, II, pp. 390–1; Carnot to the Committee of Public Safety, 2 August 1793, *CC*, II, p. 437; General Merbion to the Committee of Public Safety, 24 November 1793, *CC*, IV, p. 172; Decree, 9 March 1793, *DC*, V, p. 186. For camp followers see Laukhard, *Leben*, II, p. 111.
- 70 Commissary Petitjean to Carnot, 15 August 1793, *CC*, II, p. 455.
- 71 Gouvion Saint Cyr, *Mémoires*, I, pp. 223–4
- 72 Macdonald, *Recollections*, I, pp. 140–1.
- 73 For Moreau's failure to support Jourdan in 1795 and 1796 see Jourdan, *Mémoires*, p. 11; Representative Joubert to the Committee of Public Safety, 15 October 1795, Macdonald, *Recollections*, I, pp. 381–2.
- 74 For the impact of supply considerations on operations see Carnot to the representatives of the Army of the North, 30 March 1794, *CC*, IV, p. 318; Carnot to the representatives of the Army of the North, 10 April 1794, *CC*, IV, p. 326; Carnot to the representatives of the Army of the Rhine and the Army of the Moselle, 18 July 1794, *CC*, IV, pp. 508–9; Carnot to Bourbotte, 9 October 1794, *CC*, IV, p. 684; Beurnonville to Moreau, 7 November 1796, Gouvion Saint Cyr, *Mémoires*, IV, pp. 239–40; Gouvion Saint Cyr, *Mémoires*, I, p. 8; Directory to Jourdan, 12 August 1796, Jourdan, *Mémoires*, p. 305; Macdonald, *Recollections*, I, p. 171; Ney, *Memoirs*, I, pp. 82, 85. When there was nothing left to plunder, whole regiments of the army of Italy returned to France for lack of supplies. See Marbot, *Memoirs*, p. 55.
- 75 Ney, *Memoirs*, I, p. 69.
- 76 Divisions were composed of two or three brigades with a combined strength of 6,000–10,000 men. Each brigade consisted of two demi-brigades. Cavalry and artillery were attached. The composition of divisions varied according to terrain. For the composition of divisions see Carnot to Pichegru, 12 July 1794, *CC*, IV, p. 481; Gouvion Saint Cyr, *Mémoires*, I, Annex, Tables 10, 17–19, II, Annex, Table 95; General Rivet to Gouvion Saint Cyr, 7 November 1795, Gouvion Saint Cyr, *Mémoires*, II, p. 518.
- 77 For the role of artillery see Anon., *Briefe*, p. 14; Gouvion Saint Cyr, *Mémoires*, I, p. xxxvii.
- 78 For the tactics of revolutionary armies see Bricard, *Journal*, pp. 39, 146, 190; Gouvion Saint Cyr, *Mémoires*, I, p. 155; Hardy, *Mémoires*, p. 29; Knesebeck, *Betrachtungen*, pp. 77–83. Also Anon., *Die Schlacht bei Kaiserslautern* (Kaiserslautern: Thieme, 1893); Jean-Paul Bertaud, *Valmy: La Démocratie en Armes* (Paris: Julliard, 1970); Jean Colin, *La Tactique et la Discipline dans les Armées de la Révolution* (Paris: Chapelot, 1902), pp. lxiii, lxvi, lxx; V Dupuis, *La Campagne de 1793 à l'Armée du Nord et des Ardennes* (Paris: Chapelot, 1906), I, pp. 460–84; Fiedler, *Grundriß*, II, pp. 111–27; Griffith, *France*, p. 221; E. Hardy, *La Bataille de Fleurus* (Paris: Dumaine, 1876); Lynn, *Bayonets*, pp. 188–91, 211–12, 265–74; Georg Ortenburg, *Waffe und Waffengebrauch im Zeitalter der Revolutionskriege* (Koblenz: Bernhard und Graefe, 1988), pp. 161–3.

- 79 Later in the war, some armies had cavalry reserves. The cavalry reserve of the Army of the Rhine and Moselle amounted to seven regiments and two batteries of horse artillery in April 1797. See Gouvion Saint Cyr, *Mémoires*, IV, Annex, Table 85.
- 80 Ramsay Weston Phipps, *The Armies of the First French Republic and the Rise of the Marshals of Napoleon I* (London: Oxford University Press, 1926–1939), 5 vols, I, p. 155.
- 81 For Carnot's demands for determined pursuit see his 'Système Général des Opérations Militaires de la Campagne Prochaine', 2 February 1794, CC, IV, pp. 279–83; Carnot to Representatives Gillet and Duquesnoy, 27 May 1794, CC, IV, p. 382; Carnot to Jourdan, 27 May 1794, CC, IV, p. 383; Carnot to Representatives Richard and Choudieu, 18 June 1794, CC, IV, p. 432.
- 82 For the inferiority of French cavalry see Anon., *Briefe*, p. 10; Hardy, *Mémoires*, p. 29. For an unusually favourable view see Gouvion Saint Cyr, *Mémoires*, I, p. xxxix.
- 83 Cognet to his parents, 22 October 1793, Cognet, *Souvenirs*, p. 5; Macdonald, *Recollections*, I, pp. 158, 170–1.
- 84 Macdonald, *Recollections*, I, p. 187.
- 85 Cognet to his parents, 22 October 1793, Cognet, *Souvenirs*, p. 5; General Biron to the Ministry of War, 23 August 1792, CC, I, p. 82.
- 86 Carnot to Saint Just and Le Bas, 14 November 1793, CC, IV, p. 100; Carnot to Representatives Richard and Choudieu, 18 June 1794, CC, IV, p. 432; Decree, 16 May 1793, DC, V, pp. 285–7.
- 87 Anon., *Briefe*, pp. 4–5; Bricard, *Journal*, pp. 66, 106; Carnot to the Committee of Public Safety, 17 July 1793, CC, II, p. 407; Cognet to his parents, 15 January 1794, Cognet, *Souvenirs*, p. 10; Cognet to his parents, 11 March 1794, Cognet, *Souvenirs*, p. 12; Dellard, *Mémoires*, p. 16; Gouvion Saint Cyr, *Mémoires*, IV, pp. 217–18; Knesebeck, *Betrachtung*, pp. 77–9; Macdonald, *Recollections*, I, pp. 160, 174, 179; Ney, *Memoirs*, I, p. 92. Also Lynn, *Bayonets*, p. 239; Phipps, *Armies*, II, p. 196.
- 88 Georg Heinrich von Berenhorst, *Betrachtungen über die Kriegskunst* (Leipzig: Fleischer, 1797–1798), 2 vols, II, pp. 338, 444, 457; Georg Heimich von Berenhorst, *Notwendige Randglossen zu den Betrachtungen über einige Unrichtigkeiten in den Betrachtungen über die Kriegskunst* (Leipzig: Fleischer, 1802), pp. 5, 30.
- 89 Berenhorst, *Betrachtungen*, II, pp. 161–2.
- 90 Berenhorst, *Betrachtungen*, I, p. 252, II, pp. 168–9, 447; Georg Heinrich von Berenhorst, *Aphorismen* (Leipzig: Fleischer, 1805), pp. 6, 13–15.
- 91 Berenhorst, *Betrachtungen*, II, pp. 100–1, 186, 191, 398; Berenhorst, *Aphorismen*, pp. 5, 39, 43–4, 56.
- 92 Berenhorst, *Aphorismen*, pp. 103–4.
- 93 *Ibid.*, pp. 22–3.
- 94 Scharnhorst, *Militärische Schriften*, p. 193.
- 95 *Ibid.*, pp. 202–4, 206, 208–10, 246.
- 96 Scharnhorst, *Ausgewählte Schriften*, pp. 113–16.
- 97 Gerhard Johann David von Scharnhorst, 'Einige Bemerkungen über die Dienstverhältnisse im Militair', *Neues militärisches Journal*, Vol. XXV (1805), pp. 1–54, 3–5, 7, 11, 17.
- 98 For allied weaknesses see Scharnhorst, *Militärische Schriften*, pp. 196, 198–201, 205–8, 228–30, 234–6; Gerhard Johann David von Scharnhorst, 'Bemerkungen über den Plan zur Führung des Krieges im Großen, den die Verbundenen beim Anfange des Revolutionskrieges befolgten', *Neues militärisches Journal*, Vol. X (1801), pp. 85–134, p. 108. For the disadvantages the allies had to contend with see Scharnhorst, *Militärische Schriften*, pp. 210–15, 217–19, 223–6, 257–8.
- 99 See Heinz Stübiger, *Scharnhorst: Die Reform des preußischen Heeres* (Göttingen: Muster-Schmidt, 1988), p. 59.
- 100 Scharnhorst, 'Bemerkungen über den Plan', p. 92.
- 101 Scharnhorst, *Ausgewählte Schriften*, pp. 123–4, 146.



- 102 Scharnhorst, *Militrische Schriften*, p. 250.
- 103 Adam Heinrich Dietrich von Blow, *Geist des Neuern Kriegssystems* (Hamburg: Hofmann, 1805), pp. 103, 109; Adam Heinrich Dietrich von Blow, *Neue Taktik der Neuern wie sie sein soll* (Berlin: Himborg, 1805), 2 vols, I, pp. 9, 11, II, pp. 146, 153.
- 104 Blow, *Geist*, p. 121; Blow, *Taktik*, I, p. 9.
- 105 Blow, *Taktik*, II, pp. 17–18, 28, 57, 131, 133.
- 106 In this respect, Blow’s work was sometimes contradictory. See Blow, *Geist*, pp. 3, 11, 24, 209, 235; Blow, *Taktik*, I, pp. 167–8.
- 107 Blow, *Geist*, pp. 14–20, 22, 64, 100, 206.
- 108 *Ibid.*, pp. 128, 208.
- 109 Blow, *Taktik*, I, p. 65.
- 110 *Ibid.*, I, p. 66. In fact, these operational signalling devices were not invented in this period. The Chappe telegraph was for strategic signalling only.
- 111 Blow, *Geist*, pp. 6–7; Blow, *Taktik*, I, p. 80, II, pp. 58, 95–6, 140.
- 112 For Blow’s views on tactics see *Geist*, pp. 121, 133, 142, 159, 176, 180–1, 207–8; Blow, *Taktik*, I, pp. 76–7, 89, 108–12, 114–15, 121–2, 133, 138, 140–1, 150, 156, 158, 162–3, 171, 181, 185, 187.
- 113 Blow, *Taktik*, I, p. 144, II, p. 92.
- 114 For the specific qualities of both kinds of armies see Friedrich von der Decken, *Betrachtungen ber das Verhltnis des Kriegsstandes zu dem Zwecke der Staaten* (Hanover: Helwing, 1800), pp. 70, 77–9, 82–3, 173–4.
- 115 Decken, *Betrachtungen*, pp. 69, 103–10.
- 116 *Ibid.*, pp. 80–1, 191–206, 317.
- 117 *Ibid.*, pp. 212, 226, 291.
- 118 *Ibid.*, pp. 247, 251, 263, 267.
- 119 *Ibid.*, pp. 91, 184–5.
- 120 *Ibid.*, pp. 119–24.
- 121 *Ibid.*, pp. 44–54.
- 122 *Ibid.*, pp. 75–6, 159.
- 123 *Ibid.*, pp. 15–24.
- 124 Knesebeck, *Betrachtungen*, pp. 104–11.
- 125 Colmar von der Goltz, *Robach und Jena: Studien ber die Zustnde und das geistige Leben in der preuischen Armee whrend der bergangszeit vom XVIII. zum XIX. Jahrhundert* (Berlin: Mittler, 1883), pp. 146–52.
- 126 Prince August of Prussia would later become a supporter of Prussia’s military reforms.
- 127 Prince August of Prussia, ‘ber die verschiedenen Arten des Angriffs’, *Denkwrdigkeiten der militrischen Gesellschaft zu Berlin*, Gerhard Johann David von Scharnhorst (ed.), (Osnabrck: Biblio, 1985), Vol. I, pp. 36–51.
- 128 Valentini, *Abhandlung ber den kleinen Krieg und ber den Gebrauch der leichten Truppen* (Berlin: Himborg, 1802), pp. 60–85.
- 129 Beulwitz, ‘ber die leichte Infanterie’, *Denkwrdigkeiten der militrischen Gesellschaft zu Berlin*, Gerhard Johann David von Scharnhorst (ed.) (Osnabrck: Biblio, 1985), Vol. III, pp. 254–95.

## 3

## THE JENA CAMPAIGN

- 1 On French attitudes towards coup and coronation see Louis Bergeron, *France under Napoleon*, trans. R.R.Palmer (Princeton: Princeton University Press, 1981), pp. 13–14, 106; Lefebvre, *Napoleon*, p. 68; Robiquet, *France*, pp. 31–4, 188–9.

- 2 Decree, Napoleon, 15 October 1806, Napoleon, *Correspondance de Napoléon Ier: Publiée par Ordre de l'Empereur Napoléon III* (Paris: Plon, 1858–1870), 32 vols, XIII, no. 11010.
- 3 On the domestic imperative see Bergeron, *France*, p. 106; Lefebvre, *Napoleon*, pp. 225–6, 237.
- 4 For Napoleon's diplomacy see Napoleon to Murat, 30 July 1806, *CN*, XIII, no. 10575; Napoleon to Talleyrand, 2 August 1806, *CN*, XIII, no. 10586; Napoleon to Murat, 2 August 1806, Napoleon, *CN*, XIII, no. 10587; Napoleon to Talleyrand, 6 August 1806, *CN*, XIII, no. 10604; Napoleon to Berthier, 10 September 1806, Napoleon, *CN*, XIII, no. 10757; Napoleon to Joseph Bonaparte, 10 September 1806, *CN*, XIII, no. 10760; Napoleon to Frederick William III of Prussia, 12 September 1806, *CN*, XIII, no. 10764; Napoleon to Laforest, 12 September 1806, *CN*, XIII, no. 10765; Napoleon to Durand, 12 September 1806, *CN*, XIII, no. 10766; Napoleon to Bignon, 12 September 1806, *CN*, XIII, no. 10767; Napoleon to Talleyrand, 13 September 1806, *CN*, XIII, no. 10772; Napoleon to Talleyrand, 22 September 1806, *CN*, XIII, no. 10856; Napoleon to Joseph Bonaparte, 30 September 1806, *CN*, XIII, no. 10920; Napoleon to Mortier, 1 October 1806, *CN*, XIII, no. 10926; Napoleon to the King of Bavaria, 7 October 1806, *CN*, XIII, no. 10956, Napoleon to Maret, 10 October 1806, *CN*, XIII, no. 10975; Napoleon to King Frederick William III of Prussia, 12 October 1806, *CN*, XIII, no. 10990; Alfred Armand Robert de Saint Chamans, *Mémoires du Général de Saint-Chamans* (Paris: Plon, 1896), p. 41. Also Gates, *Wars*, p. 51; Oscar von Lettow-Vorbeck, *Der Krieg von 1806 und 1807* (Berlin: Mittler, 1891–1896), 4 vols, I, pp. 12–17, 27, 32, 120–2, 126, II, pp. 37–9; James Marshall-Cornwall, *Napoleon as Military Commander* (London: Batsford, 1967), pp. 146–8; Petre, *Conquest*, pp. 189–90; Ross, *History*, pp. 239–41, 254, 256.
- 5 For Prussia's burdensome alliances see Hiller, *Denkwürdigkeiten*, p. 75; Friedrich August von der Marwitz, W. Kayser (ed.), *Jena 1806: Aus gleichzeitigen Tagebuchaufzeichnungen* (Berlin: Junker, 1937), p. 42; Friedrich Carl Ferdinand von Müffling, *Operationsplan der Preußisch-Sächsischen Armee im Jahr 1806* (Weimar: no publisher, 1807), p. 3. Also Lettow-Vorbeck, *Krieg*, I, p. 155; Petre, *Conquest*, p. 46.
- 6 Napoleon to King Frederick William III of Prussia, 12 October 1806, *CN*, XIII, no. 10990.
- 7 On the combination of diplomacy and last-minute mobilization see Lettow-Vorbeck, *Krieg*, I, pp. 35–7.
- 8 In this work, victory is considered total if the enemy is forced to surrender unconditionally. After Jena and Auerstädt, Prussia was utterly at the mercy of France and Russia which negotiated over her fate. Therefore, Napoleon's double victory over the Prussian army can be regarded as a total victory.
- 9 Ross, *History*, p. 257.
- 10 On the disposition of Prussian forces see Carl Phillip Gottlieb von Clausewitz, *Nachrichten über Preußen in seiner großen Katastrophe*, 2nd improved edition (Berlin: Mittler, 1908), pp. 63–6; Hiller, *Denkwürdigkeiten*, p. 75. Also John R. Elting and Vincent J. Esposito, *Military History and Atlas of the Napoleonic Wars*, 2nd revised edition (London: Greenhill, 1999), p. 58; Petre, *Conquest*, p. 46.
- 11 On Prussian diplomacy see Clausewitz, *Nachrichten*, p. 60; Elting and Esposito, *Atlas*, p. 57; Lettow-Vorbeck, *Krieg*, I, pp. 17, 96, 108, 121, 148, 156, II, pp. 37–9; Petre, *Conquest*, pp. 4–13; Brendan Simms, *The Impact of Napoleon: Prussian High Politics, Foreign Policy and the Crisis of the Executive, 1797–1806* (Cambridge: Cambridge University Press, 1997), p. 339.
- 12 For Napoleon's universal control and the role of central administration see Napoleon to General Dejean, 29 July 1806, *CN*, XIII, no. 10562; Napoleon to Rapp, 1 August, *CN*, XIII, no. 10579; Napoleon to the King of Naples, 20 August 1806, *CN*, XIII, no. 10674. Also Bergeron, *France*, pp. 12, 23–9, 53; Creveld, *Command*, p. 65; Bernard Druène, 'Der Feldherr Napoleon: Theorie und Praxis seiner Kriegskunst', Wolfgang von Groote and Klaus-Jürgen Müller (eds), *Napoleon I. und das Militärwesen seiner Zeit* (Freiburg:

- Rombach, 1968), pp. 37–65, 37; John R. Elting, *Swords around a Throne: Napoleon's Grande Armée* (London: Weidenfeld and Nicholson, 1988), pp. 56–7, 325; Hermann Giehl, *Der Feldherr Napoleon als Organisator* (Berlin: Mittler, 1911), pp. 5–9; Lettow-Vorbeck, *Krieg*, I, p. 67; Marshall-Cornwall, *Napoleon*, p. 151; Petre, *Conquest*, p. 9; Robiquet, *France*, pp. 196–7.
- 13 On Prussia's lacklustre mobilization see Clausewitz, *Nachrichten*, pp. 59, 61; Werner von Herwig, H. Hollender (ed.), *Erinnerungen und Briefe eines preußischen Offiziers aus den Jahren 1805 bis 1815* (Kattowitz: Böhm, 1913), pp. 14–15; Friedrich August von der Marwitz, F. Meusel (ed.), *Friedrich August Ludwig von der Marwitz: Ein märkischer Edelmann im Zeitalter der Befreiungskriege* (Berlin: Mittler, 1908), 2 vols, I, pp. 294–5, 301; Otto August Johann Jacob Rühle von Lilienstern, *Bericht eines Augenzeugen von dem Feldzuge*, 2nd improved edition (Tübingen: Cotta, 1809), 2 vols, I, pp. 6, 14, 28–9. Also Lettow-Vorbeck, *Krieg*, I, pp. 96, 154. For the lack of an integrated strategy see Clausewitz, *Nachrichten*, p. 75. Also Lettow-Vorbeck, *Krieg*, I, pp. 148, 154. For Frederick William's rule in general see Boyen, *Erinnerungen*, I, pp. 108, 124; Clausewitz, *Nachrichten*, pp. 5–6. Also Goltz, *Roßbach*, p. 302; Lettow-Vorbeck, *Krieg*, I, pp. 2, 16, 51, 54, 109. Simms, in contrast, argues that Frederick William was a very active player in foreign policy. It seems that Simms overemphasizes occasional bursts of activity and intervention by the king. See Simms, *Impact*, p. 340.
- 14 For the inefficiency of Prussian military administration see Boyen, *Erinnerungen*, I, p. 57. Also Goltz, *Roßbach*, p. 110.
- 15 For French manpower mobilization see Napoleon to Berthier, 5 September 1806, *CN*, XIII, no. 10743; Napoleon to Berthier, 9 September 1806, *CN*, XIII, no. 10756; Napoleon to General Dejean, 5 September 1806, Napoleon, E. Picard and L. Tuéty (eds), *Correspondance Inédite de Napoléon Ier* (Paris: Lavauzelle, 1912–1913), 4 vols, I, no. 627. Also Elting, *Swords*, pp. 40, 321; Lefebvre, *Napoleon*, p. 217; Lettow-Vorbeck, *Krieg*, I, p. 61. On the strength and disposition of French forces see Elting and Esposito, *Atlas*, p. 57.
- 16 On the opposition against conscription see Forrest, *Conscripts*; Robiquet, *France*, pp. 177–8; Tulard, *Vie*, pp. 129–55. The effectiveness of French conscription is a matter of debate. Elting holds that on average half of the conscripts dodged service. Bergeron calculates that draft evasion amounted to 27 per cent before 1806, declining to 13 per cent between 1806 and 1810. See Bergeron, *France*, p. 104; Elting, *Swords*, p. 40.
- 17 On Napoleon's social policy see Bergeron, *France*, pp. 6–9, 16–19, 37, 63–70, 101–2, 104, 126–32, 136, 143, 157, 204; Howard Brown, 'From Organic Society to Security State', *Journal of Modern History*, Vol. LXIX, No. 4, 1997, pp. 661–96, 694–5; Lefebvre, *Napoleon*, pp. 68, 123, 128–30, 133–4, 150–5, 185–6; Robiquet, *France*, pp. 40–50; Jean Baptiste Modeste Eugène Vachée, *Napoleon at Work*, trans. F. Lees (London: Black, 1914), p. 3. On the new nobility see Bergeron, *France*, pp. 64, 68–70, 122; Lefebvre, *Napoleon*, pp. 144, 159; Robiquet, *France*, pp. 55–6; Vachée, *Napoleon*, p. 188. For Napoleon's use of propaganda see Order, Napoleon, 6 October 1806, *CN*, XIII, no. 10948; 3e Bulletin, Napoleon, 13 October 1806, *CN*, XIII, no. 10994; 4e Bulletin, 13 October 1806, *CN*, XIII, no. 11002; 5e Bulletin, 15 October 1806, *CN*, XIII, no. 11009. Also Tulard, *Vie*, p. 94. On Napoleon's economic policies see Bergeron, *France*, pp. 172–83; Rondo E. Cameron, *France and the Economic Development of Europe: 1800–1914* (Princeton: Princeton University Press, 1961), pp. 1–11, 30–3; Gates, *Wars*, pp. 150–1, 162; Giehl, *Feldherr*, pp. 123–33; Lefebvre, *Napoleon*, pp. 131, 165–8; Robiquet, *France*, pp. 205–9; Trebilcock, *Industrialization*, pp. 125–6, 130.
- 18 For Napoleon's police state see Napoleon to Fouché, 14 September 1806, *CN*, XIII, no. 10779. Also Bergeron, *France*, pp. 9–10, 32, 97; Lefebvre, *Napoleon*, pp. 68, 131, 182.
- 19 Rainer Wohlfeil, 'Vom Stehenden Heer des Absolutismus zur Allgemeinen Wehrpflicht: 1789–1814', *Militärgeschichtliches Forschungsamt* (ed.), *Handbuch zur deutschen*

- Militärsgeschichte: 1648–1939* (Frankfurt: Bernhard und Graefe, 1964–1979), Vol. II, pp. 9–212, 99.
- 20 For the pension system see Prussia, *Infanterie 1788*, pp. 613–14.
- 21 For the post-Frederician canton system see Boyen, *Erinnerungen*, I, pp. 165–6. Also Goltz, *Roßbach*, p. 115.
- 22 On Prussian economic policy see Hanna Schissler, *Preußische Agrargesellschaft im Wandel: Wirtschaftliche, gesellschaftliche und politische Transformationsprozesse von 1763 bis 1847* (Göttingen: Vandenhoeck, 1978). For the impact of Prussian economic weakness on military effectiveness see Clausewitz, *Nachrichten*, p. 12. Also Curt Jany, *Der Preussische Kavalleriedienst vor 1806* (Berlin: Mittler, 1906), p. 15; Frederick N. Maude, *The Jena Campaign 1806* (London: Swan, 1909), p. 15; Wohlfeil, 'Heer', p. 161.
- 23 On Napoleon's education policy see Trebilcock, *Industrialization*, pp. 126–7; Tulard, *Vie*, p. 254.
- 24 For officer selection and promotion see Davout, Louis Nicolas, L.C.E.J.C. Davout (ed.), *Opérations du 3e Corps: 1806–1807* (Paris: Lévy, 1896), p. 70. Also Elting, *Swords*, pp. 168, 590; Lefebvre, *Napoleon*, p. 219; G. Teitler, *The Genesis of the Professional Officers' Corps* (London: Sage, 1977), p. 208; Vachée, *Napoleon*, p. 218.
- 25 On Napoleon's support for science and technology see Bergeron, *France*, p. 200; Cameron, *France*, pp. 43–7; Giehrl, *Feldherr*, p. 140.
- 26 For the composition and training of the officer corps see Wilhelm Ludwig Victor Henckel von Donnersmarck, *Erinnerungen aus meinem Leben* (Zerbst: Kummer, 1846), p. 10. Also Goltz, *Roßbach*, pp. 110, 113–14, 173, 289–91; Wohlfeil, 'Heer', pp. 82, 85, 91–2.
- 27 For army composition see Robert Guillemard, C.O. Barbaroux and J.A. Lardur (eds), *The Adventures of a French Sergeant* (London: Hutchinson, 1898), pp. 10–13. Also Elting, *Swords*, p. 321; Corvisier, *Armée*, I, p. 542.
- 28 Vachée, *Napoleon*, p. 220.
- 29 On the impact of morale on military effectiveness, see Delbrück, *Aufsätze*, pp. 238, 240, 286. For positive elements of motivation see Jean-Roche Coignet, J. Fortescue (ed.), *The Note-Books of Captain Coignet, Soldier of the Empire: 1799–1816* (London: Greenhill, 1986), p. 102; Guillemard, *Adventures*, pp. 11–13; Marbot, *Memoirs*, pp. 176, 355, 529; Jean Rapp, A. Buloz (ed.), *Memoirs of General Count Rapp* (London: Colburn, 1823), pp. 101–2. Also Elting, *Swords*, pp. 63, 187, 195, 202, 347–8; Lefebvre, *Napoleon*, p. 219; Lettow-Vorbeck, *Krieg*, I, p. 62; Petre, *Conquest*, p. 19; Robert van Roosbroeck, 'Der Einfluß Napoleons und seines Militärsystems auf die preußische Kriegführung und Kriegstheorie', Wolfgang von Groote and Klaus-Jürgen Müller (eds), *Napoleon I. und das Militärwesen seiner Zeit* (Freiburg: Rombach, 1968), pp. 183–213, 186; Vachée, *Napoleon*, pp. 213, 224, 231.
- 30 For the text see Lettow-Vorbeck, *Krieg*, I, Annex no. 8.
- 31 For evidence of Prussian patriotism see Anon., F.M. Kircheisen (ed.), *Wider Napoleon! Ein deutsches Reiterleben: 1806–1815* (Stuttgart: Lutz, 1911), 2 vols, I, p. 61; Johann von Borcke, F.W.J.F.S. Leszczyński (ed.), *Kriegerleben des Johann von Borcke* (Berlin: Mittler, 1888), p. 60; Boyen, *Erinnerungen*, I, pp. 211, 273; Herwig, *Erinnerungen*, pp. 22–4; Klöden, *Berlin*, pp. 266–7, 276; Marbot, *Memoirs*, pp. 173, 188; Marwitz, *Edelmann*, I, pp. 285, 312; Marwitz, *Jena*, pp. 12–14, 17. Also Lettow-Vorbeck, *Krieg*, I, pp. 24, 99; Marshall-Cornwall, *Napoleon*, p. 148. For an example of the indifference-theory see Wohlfeil, 'Heer', pp. 82, 147–9.
- 32 On civil-military relations see Büsch, *Sozialleben*, pp. 144–67; Lettow-Vorbeck, *Krieg*, I, p. 54. Maude, supported by Reiche's testimony upholds the image of the arrogant Prussian officer, whereas Goltz, supported by Marwitz's and Blumen's testimonies denies this charge. See Carl Friedrich von Blumen, M. von Unruh (ed.), *Von Jena bis Neisse* (Leipzig: Wigand, 1904), p. 10; Marwitz, *Edelmann*, I, pp. 44–5; Reiche, *Memoiren*, p. 207. Also Goltz, *Roßbach*, pp. 292–4; Maude, *Jena*, p. 12. On French civil-military relations see Robiquet, *France*, pp. 179–84; Tulard, *Vie*, p. 260.

- 33 For the shift from patriotic outrage to opportunism see Anon., *Reiterleben*, I, p. 148; Boyen, *Erinnerungen*, I, p. 123; Davout, *Opérations*, p. 61; Marwitz, *Edelmann*, I, p. 318; Marwitz, *Jena*, pp. 17, 88. Also Goltz, *Roßbach*, pp. 281–7.
- 34 For Prussian guerrilla warfare see Vincent Bertrand, Chaland de la Guillauche (ed.), *Mémoires du Capitaine Bertrand* (Angers: Siraudeau, 1909), p. 24; Blumen, *Jena*, p. 33; Davout, *Operations*, pp. 55–6, 61; Herwig, *Erinnerungen*, pp. 22, 24; Wilhelm von Rahden, *Wanderungen eines alten Soldaten* (Berlin: Duncker, 1846), 3 vols, I, p. 12.
- 35 For the mode of recruitment see Boyen, *Erinnerungen*, I, p. 164; Prussia, *Infanterie 1788*, pp. 589–90, 593.
- 36 For officer-men relations see Boyen, *Erinnerungen*, I, pp. 114–15, 119; Minutoli, *Erinnerungen*, pp. 233, 258–9; Prussia, *Infanterie 1788*, pp. 66–7, 192, 200, 205, 559, 670; Karl von Suckow, *Aus meinem Soldatenleben* (Stuttgart: Krabbe, 1862), pp. 10–15; Carl Friedrich Heinrich von Wedel, C. Troeger (ed.), *Lebenserinnerungen des Generalleutnants Karl von Wedel* (Berlin: Mittler, 1911), 2 vols, I, p. 21; Wissel, *Abhandlung*, pp. 149–50, 168. Also Goltz, *Roßbach*, p. 109.
- 37 Prussia, *Infanterie 1788*, p. 571.
- 38 Boyen, *Erinnerungen*, I, p. 38. It is time that the *cliché* that the Prussian mercenary was motivated only by fear of his officers is jettisoned. For an example of this one-sided view see Teitler, *Genesis*, p. 209.
- 39 For the attitudes of the Poles see Anon., F. Pflug (ed.), *Von Auerstädt bis Belle-alliance: Nach den Erinnerungen eines preußischen Veteranen* (Berlin: Rauh, no date), 2 vols, I, p. 20; Blumen, *Jena*, p. 68; Clausewitz, *Nachrichten*, p. 15; Rahden, *Wanderungen*, I, pp. 7, 10; Wedel, *Lebenserinnerungen*, I, p. 46. Also Lettow-Vorbeck, *Krieg*, I, pp. 53, 154.
- 40 For Prussian morale and discipline during the campaign see Anon., *Erinnerungen*, I, p. 5; Anon., *Reiterleben*, I, pp. 61, 76–8, 102, 105–6, 152–4, 163; Blumen, *Jena*, pp. 9–10, 25, 34; Boyen, *Erinnerungen*, I, p. 138; Clausewitz, *Nachrichten*, pp. 96, 136; Henckel, *Erinnerungen*, p. 51; Herwig, *Erinnerungen*, p. 12; Marwitz, *Jena*, pp. 28, 33, 44, 48–9; Rühle, *Bericht*, I, pp. 114–18, 125, 137; Suckow, *Soldatenleben*, p. 63; Wedel, *Lebenserinnerungen*, I, pp. 35, 42, 55–65. Also Delbrück, *Aufsätze*, p. 228; Lettow-Vorbeck, *Krieg*, I, pp. 49, 53, 76, 265, 267, 272–3, 286, 298, 322, 334–5, 339, II, p. 19; Maude, *Jena*, pp. 94, 102, 155, 188; Petre, *Conquest*, pp. 111, 196.
- 41 Whereas Marwitz, Borcke, and Boyen noted a high degree of morale among mercenaries, Wohlfeil, supported by evidence from Wedel, maintains the contrary. See Borcke, *Kriegerleben*, pp. 17, 22, 26, 29; Boyen, *Erinnerungen*, I, p. 211; Marwitz, *Edelmann*, I, pp. 403, 439, 442; Wedel, *Lebenserinnerungen*, I, p. 46. Also Wohlfeil, ‘Heer’, p. 87.
- 42 Camon, *Système*, pp. 17–18; Colin, *Transformations*, pp. 241, 250.
- 43 For examples of comprehensive briefings see Berthier to Davout, 7 October 1806, Davout, *Opérations*, pp. 11–12; Berthier to Davout, 12 October 1806, Davout, *Operations*, pp. 218–19; Berthier to Lannes, 5 October 1806, Paul Jean Foucart (ed.), *Campagne de Prusse* (Paris: Librairie Militaire, 1887), 2 vols, I, pp. 326–7; Berthier to Bernadotte, 6 October 1806, Foucart, *Campagne*, I, pp. 344–5; Berthier to Lannes, 9 October 1806, Foucart, *Campagne*, I, p. 426; Berthier to Bernadotte, 9 October 1806, Foucart, *Campagne*, I, p. 427; Berthier to Lannes, 10 October 1806, Foucart, *Campagne*, I, p. 457; Berthier to Lannes, 12 October 1806, Foucart, *Campagne*, I, p. 518; Berthier to Augereau, 12 October 1806, Foucart, *Campagne*, I, p. 519; Berthier to Davout, 12 October 1806, Foucart, *Campagne*, I, p. 520; Napoleon to Soult, 29 September 1806, *CN*, XIII, no. 10900; Napoleon to Soult, 5 October 1806, *CN*, XIII, no. 10941; Napoleon to Soult, 10 October 1806, *CN*, XIII, no. 10977; Napoleon to Soult, 10 October 1806, *CN*, XIII, no. 10980.
- 44 On Napoleon’s secrecy towards his marshals see Creveld, *Command*, p. 87; Giehl, *Feldherr*, p. 31; Maude, *Jena*, pp. 121–2; Vachée, *Napoleon*, pp. 68–9.
- 45 For inter-corps cooperation see Soult to Murat, 2 October 1806, Foucart, *Campagne*, I, p. 259; Berthier to Lannes, 8 October 1806, Foucart, *Campagne*, I, p. 403; Berthier to Lannes,

- 10 October 1806, Foucart, *Campagne*, I, p. 457; Augereau to Lannes, 13 October 1806, Foucart, *Campagne*, I, p. 590; Murat to Ney, 17 October 1806, Joachim Murat, A. Lumbroso (ed.), *Correspondance de Joachim Murat* (Turin: Frassati, 1899), pp. 148–9. Also Elting, *Swords*, pp. 96–7.
- 46 Borcke, *Kriegerleben*, pp. 16, 20.
- 47 On the composition of divisions see Lettow-Vorbeck, *Krieg*, I, Annex, no. 1.
- 48 On the structure of Imperial headquarters and the general staff see Creveld, *Command*, pp. 66–71; Elting, *Swords*, pp. 83–92; Giehl, *Feldherr*, p. 27; Vachée, *Napoleon*, pp. 76–147.
- 49 Napoleon to Berthier, 17 September 1806, *CN*, XIII, no. 10804; Napoleon to General Dejean, 20 September 1806, Napoleon, *Correspondance Inédite*, I, no. 664. On French corps and divisional staffs see Elting, *Swords*, pp. 82–3, 95.
- 50 For staff routines and Napoleon's style of command see Dieudonné Adrien Paul Francois Charles Henri Thiébault, *Manuel Général du Service des États-majors Généraux et Divisionnaires dans les Armées* (Paris: Magimel, 1813). Also Elting, *Swords*, pp. 1–3, 68, 90, 96–8; Giehl, *Feldherr*, pp. 28–32; Marshall-Cornwall, *Napoleon*, p. 159; Petre, *Conquest*, p. 28; Vachée, *Napoleon*, pp. 10, 149.
- 51 On the speed of staff work see Creveld, *Command*, pp. 60–2, 88; Petre, *Conquest*, pp. 26–8; Vachée, *Napoleon*, p. 72.
- 52 For mistakes in French staff work see Berthier to Murat, 12 October 1806, Foucart, *Campagne*, I, p. 518; Napoleon to Murat, 12 October 1806, *CN*, XIII, no. 10983. Also Lettow-Vorbeck, *Krieg*, I, pp. 129, 254; Vachée, *Napoleon*, p. 62.
- 53 On regular reports see Berthier to corps' chiefs of staff, 29 September 1806, Foucart, *Campagne*, I, 192; Davout to Berthier, Foucart, *Campagne*, I, p. 335; Napoleon to Rapp, 1 August 1806, *CN*, XIII, no. 10579. Also Elting, *Swords*, pp. 97–8.
- 54 On signals see Creveld, *Command*, pp. 60, 290; Elting, *Swords*, pp. 104–12.
- 55 For direct correspondence with the marshals see Murat to Napoleon, 5 October 1806, Foucart, *Campagne*, I, p. 337; Lannes to Napoleon, 10 October 1806, Foucart, *Campagne*, I, p. 465; Napoleon to Soult, 29 September 1806, *CN*, XIII, no. 10900; Napoleon to Soult, 8 October 1806, *CN*, XIII, no. 10971; Napoleon to Murat, 8 October 1806, *CN*, XIII, no. 10972. Also Creveld, *Command*, p. 81.
- 56 It is generally difficult to establish to what degree Napoleon and his predecessors during the Wars of the French Revolution had been influenced by individual theorists. Napoleon's acquaintance with works of military theory has been retraced by Colin. See Colin, *Éducation*.
- 57 For Berthier's inferior role see Napoleon to Berthier, February 1806, Foucart, *Campagne*, I, p. xx; Berthier to Ney, 18 January 1807, Foucart, *Campagne*, I, p. xx. Also Lefebvre, *Napoleon*, p. 220; Lettow-Vorbeck, *Krieg*, I, pp. 132–6; Marshall-Cornwall, *Napoleon*, p. 151; Petre, *Conquest*, p. 30; Vachée, *Napoleon*, p. 24.
- 58 For the organization and work of the Prussian general staff see Clausewitz, *Nachrichten*, pp. 28–30; Friedrich Carl Ferdinand von Müffling, *Aus meinem Leben* (Berlin: Mittler, 1851), pp. 6–9; Rühle, *Bericht*, I, p. 36. Also Marshall-Cornwall, *Napoleon*, p. 156; Petre, *Conquest*, pp. 37–8; Stübig, *Scharnhorst*, pp. 53–5.
- 59 For the relations between army commanders and their chiefs of staff see Clausewitz, *Nachrichten*, p. 23; Müffling, *Leben*, pp. 10, 16. Also Lettow-Vorbeck, *Krieg*, I, pp. 115, 268.
- 60 On Scharnhorst's efforts in staff officer training see Stübig, *Scharnhorst*, pp. 43–9.
- 61 Marwitz, *Edelmann*, I, pp. 234, 237–8.
- 62 For Prussian staff failures see Anon., *Erinnerungen*, I, pp. 4–5; Anon., *Reiterleben*, I, 92; Blumen, *Jena*, p. 12; Henckel, *Erinnerungen*, pp. 41, 45; Marwitz, *Edelmann*, I, pp. 234, 237–8; Marwitz, *Jena*, pp. 26, 30, 35; Rühle, *Bericht*, I, p. 23; Wedel, *Lebenserinnerungen*, I, pp. 35, 37. Also Lettow-Vorbeck, *Krieg*, I, pp. 163, 230, 290, II, pp. 12–13. After Jena, Massenbach has received much blame for his incompetent conduct during the campaign.

- Accounts of the campaign sympathetic to Scharnhorst have made Massenbach the scapegoat. Though Massenbach's incompetence can hardly be doubted, it must be noted that the work of Scharnhorst's staff was not very impressive either, which has been overlooked by German historiography. Marwitz, for instance, considered Scharnhorst a poor chief of staff, though his views might have been coloured by his opposition to Scharnhorst's post-1806 reforms. See Marwitz, *Edelmann*, I, p. 504.
- 63 For operational command and control procedures and their impact on operational speed and flexibility see Borcke, *Kriegerleben*, p. 20; Rühle, *Bericht*, I, p. 85. Also Lettow-Vorbeck, *Krieg*, I, pp. 115–16, 299, 338; Marshall-Cornwall, *Napoleon*, p. 157; Petre, *Conquest*, p. 38.
- 64 Strictly speaking, the allocation of troops to theatres of war is part of the strategic rather than the operational plan. For the strategic disposition of troops see Napoleon to General Dejean, 23 August 1806, *CN*, XIII, no. 10688; Napoleon to Berthier, 15 September 1806, *CN*, XIII, no. 10787; Napoleon to Eugène, 15 September 1806, *CN*, XIII, no. 10788; Napoleon to Eugène, 15 September 1806, *CN*, XIII, no. 10789; Napoleon to Eugène, 18 September 1806, *CN*, XIII, no. 10809; Napoleon to Berthier, 19 September 1806, *CN*, XIII, no. 10817; Napoleon to Cambacérès, 30 September 1806, *CN*, XIII, no. 10915; Napoleon to Eugène, 7 October 1806, *CN*, XIII, no. 10964. Also Colin, *Transformations*, pp. 233, 235; Marshall-Cornwall, *Napoleon*, p. 151; Petre, *Conquest*, p. 46.
- 65 Napoleon to General Dejean, 25 July 1806, *CN*, XIII, no. 10549; Napoleon to General Dejean, 23 August 1806, *CN*, XIII, no. 10688.
- 66 For Napoleon's operations plan see Berthier to Villemanzy, 3 October 1806, Foucart, *Campagne*, I, pp. 281–2; Berthier to Lannes, 8 October 1806, Foucart, *Campagne*, I, p. 403; Berthier to Lannes, 9 October 1806, Foucart, *Campagne*, I, p. 426; Berthier to Lannes, 10 October 1806, Foucart, *Campagne*, I, p. 457; Napoleon to Berthier, 5 September 1806, *CN*, XIII, no. 10744; Napoleon to Berthier, 10 September 1806, *CN*, XIII, no. 10757; Napoleon to Joseph, 10 September 1806, *CN*, XIII, no. 10760; Napoleon to Berthier, 15 September 1806, *CN*, XIII, no. 10787; Napoleon to Joseph, 15 September 1806, *CN*, XIII, no. 10792; Napoleon to Berthier, 19 September 1806, *CN*, XIII, no. 10817; Napoleon to Berthier, 19 September 1806, *CN*, XIII, no. 10818; Napoleon to Joseph, 22 September 1806, *CN*, XIII, no. 10864; Napoleon to Berthier, 30 September 1806, *CN*, XIII, no. 10909; Napoleon to Joseph, 30 September 1806, *CN*, XIII, no. 10920; Napoleon to Mortier, 1 October 1806, *CN*, XIII, no. 10926; Napoleon to Berthier, 1 October 1806, *CN*, XIII, no. 10929; Napoleon to Soult, 5 October 1806, *CN*, XIII, no. 10941; Napoleon to Murat, 10 October 1806, *CN*, XIII, no. 10976; Napoleon, D.G. Chandler (ed.), *The Military Maxims of Napoleon*, trans. G.F.D'Aguiar (London: Greenhill, 1987), pp. 55–8, 62, 64, 76. Also Colin, *Transformations*, pp. 229–32; Lettow-Vorbeck, *Krieg*, I, pp. 73, 123–6, 131–2, 135, 144–5, 176–8, 218; Marshall-Cornwall, *Napoleon*, pp. 151, 156; Chandler, 'Introduction', Petre, *Conquest*; Petre, *Conquest*, pp. 49–56, 62–3, 79, 169; Vachée, *Napoleon*, pp. 7, 17, 20, 22.
- 67 Strategic and tactical aspects are discussed in the context of the operations plan for the purpose of comparing the same principles at different levels.
- 68 For the modification of 10 October see Berthier to Lannes, 10 October 1806, Foucart, *Campagne*, I, p. 463; Soult to Napoleon, 10 October 1806, Foucart, *Campagne*, I, p. 490. Also Petre, *Conquest*, pp. 88–90.
- 69 For the modification of 11/12 October 1806 see Berthier to Davout, 12 October 1806, Foucart, *Campagne*, I, pp. 519–20; Napoleon to Berthier, 12 October 1806, *CN*, XIII, no. 10981; Napoleon to Lannes, 12 October 1806, *CN*, XIII, no. 10982. Also Lettow-Vorbeck, *Krieg*, I, pp. 284, 305; Petre, *Conquest*, p. 106.
- 70 For the modifications of 12/13 October see Davout, *Opérations*, pp. 29–30; Napoleon to Soult, 13 October 1806, Foucart, *Campagne*, I, p. 581; Berthier to Lefebvre, 13 October 1806, Foucart, *Campagne*, I, p. 585; Berthier to Soult, 13 October 1806, Foucart, *Campagne*, I, p. 585; Berthier to Ney, 13 October 1806, Foucart, *Campagne*, I, p. 585; Berthier to Davout, 13 October 1806, Foucart, *Campagne*, I, p. 586; Napoleon to Murat, 13 October

- 1806, *CN*, XIII, no. 11000. Also Colin, *Transformations*, pp. 119–21; Petre, *Conquest*, p. 126; Vachée, *Napoleon*, p. 243.
- 71 For Brunswick's lack of authority see Clausewitz, *Nachrichten*, pp. 18–19; Henckel, *Erinnerungen*, p. 42; Müffling, *Leben*, p. 15. Also Lettow-Vorbeck, *Krieg*, I, pp. 118–19, 156, 159; Marshall-Cornwall, *Napoleon*, p. 156.
- 72 For councils of war see Boyen, *Erinnerungen*, I, p. 131; Müffling, *Leben*, p. 19. Also Marshall-Cornwall, *Napoleon*, p. 157; Petre, *Conquest*, p. 65.
- 73 For political rifts in Prussian high command see Müffling, *Leben*, pp. 15–16; Scharnhorst to Rüchel, 27 September 1806, Scharnhorst, *Briefe*, p. 178; Scharnhorst to his daughter, 6 October 1806, Scharnhorst, *Briefe*, p. 281. Also Petre, *Conquest*, p. 68.
- 74 For Hohenlohe's insubordination see Rühle, *Bericht*, I, p. 88. Also Lettow-Vorbeck, *Krieg*, I, pp. 157, 201–6; Petre, *Conquest*, pp. 88–9.
- 75 For Brunswick's tenacious hopes for peace see Müffling, *Operationsplan*, p. 22; Rühle, *Bericht*, I, pp. 66–7, 77.
- 76 On Prussian contingency plans in 1804 and 1805 see Lettow-Vorbeck, *Krieg*, I, pp. 8, 90–1. For Prussian plans during the campaign see Boyen, *Erinnerungen*, I, pp. 129, 132, 134, 154–6; Clausewitz, *Nachrichten*, pp. 79–81, 96, 101–2; Müffling, *Operationsplan*, pp. 12–14, 25, 28–30, 32–6; Müffling, *Leben*, pp. 17–18; Rühle, *Bericht*, I, pp. 44–6, 63–8, 76, 78–81, 112, 140; Scharnhorst to Rüchel, 27 September 1806, Scharnhorst, *Briefe*, p. 278; Scharnhorst to Rüchel, 3 October 1806, Scharnhorst, *Briefe*, p. 281; Scharnhorst to his daughter, 7 October 1806, Scharnhorst, *Briefe*, p. 283; Scharnhorst to Rüchel, 7 October 1806, Scharnhorst, *Briefe*, p. 284; Scharnhorst to Rüchel, 9 October 1806, Scharnhorst, *Briefe*, p. 285; Scharnhorst to his brother, 13 October 1806, Scharnhorst, *Briefe*, p. 286. Also Elting and Esposito, *Atlas*, p. 57; Lettow-Vorbeck, *Krieg*, I, pp. 89–90, 98–9, 104–6, 111–12, 143–4, 146, 155, 161–2, 170, 195–6, 264, 298–302; Petre, *Conquest*, pp. 65–7, 69–71, 88–9, 104, 117.
- 77 For premature surrenders see Davout, *Opérations*, p. 75; Herwig, *Erinnerungen*, pp. 16–20; Hiller, *Denkwürdigkeiten*, pp. 87–8; Marwitz, *Edelmann*, I, pp. 315–16; Rapp, *Memoirs*, pp. 89, 114–15; Wedel, *Lebenserinnerungen*, I, p. 67. Also Petre, *Conquest*, p. 291. With respect to the loss of mental balance and its consequences, the Jena Campaign is comparable to the invasion of France in May 1940.
- 78 For Bernadotte's behaviour on 14 October see Davout, *Opérations*, pp. 29–30; Raymon Emery Phillipe Joseph de Fezensac, *Souvenirs Militaires de 1804 a 1814* (Paris: Dumaine, 1863), p. 107; Bernadotte to Napoleon, 14 October 1806, Foucart, *Campagne*, I, p. 697; Marbot, *Memoirs*, pp. 184–5, 385. Also Gates, *Wars*, p. 60; Lettow-Vorbeck, *Krieg*, I, pp. 407–8; Marshall-Cornwall, *Napoleon*, p. 159; Petre, *Conquest*, p. 173; Vachée, *Napoleon*, p. 59.
- 79 For shortcomings of French reconnaissance see Berthier to Murat, 10 October 1806, Foucart, *Campagne*, I, p. 492. Also Elting and Esposito, *Atlas*, p. 59; Giehl, *Feldherr*, p. 42; Lettow-Vorbeck, *Krieg*, I, pp. 52, 282, 285; Petre, *Conquest*, pp. 24, 82.
- 80 For French reconnaissance and military intelligence see Davout, *Opérations*, p. 13; Berthier to Napoleon, 17 September 1806, Foucart, *Campagne*, I, p. 60; Bernadotte to Berthier, 18 September 1806, Foucart, *Campagne*, I, pp. 69–70; Berthier to Napoleon, 19 September 1806, Foucart, *Campagne*, I, p. 92; Report, Captain Beaulieu, 24 September 1806, Foucart, *Campagne*, I, p. 143; Berthier to General Belliard, 24 September 1806, Foucart, *Campagne*, I, pp. 145–6; Major Guilleminot to Berthier, 29 September 1806, Foucart, *Campagne*, I, pp. 188–9; Report, Colonel Blein, 29 September 1806, Foucart, *Campagne*, I, p. 191; Bernadotte to Berthier, 1 October 1806, Foucart, *Campagne*, I, p. 247; General Savary to Napoleon, 4 October 1806, Foucart, *Campagne*, I, pp. 302–3; Marbot, *Memoirs*, p. 433; Napoleon to Berthier, 5 September 1806, *CN*, XIII, no. 10744; Napoleon to Murat, 19 September 1806, *CN*, XIII, no. 10822; Napoleon to General Bertrand, 21 September 1806, *CN*, XIII, no. 10854; Napoleon to Augereau, 21 September 1806, *CN*, XIII, no. 10855; Napoleon, *Military*



- Maxims*, p. 81. Also Creveld, *Command*, pp. 66–7; Elting, *Swords*, pp. 116–18; Giehl, *Feldherr*, pp. 45, 52–3; Marshall-Cornwall, *Napoleon*, p. 152. For contradictory and misleading intelligence see General Belliard to Berthier, 23 September 1806, Foucart, *Campagne*, I, p. 130; Bernadotte to Berthier, 23 September 1806, Foucart, *Campagne*, I, p. 131; Bernadotte to Berthier, 25 September 1806, Foucart, *Campagne*, I, pp. 152–3; Report, I Corps, 3 October 1806, Foucart, *Campagne*, I, pp. 286–7; Bernadotte to Berthier, 7 October 1806, Foucart, *Campagne*, I, p. 373; Soult to Napoleon, 7 October 1806, Foucart, *Campagne*, I, p. 378; Report, Soult, 8 October 1806, Foucart, *Campagne*, I, p. 418; Report, Soult, 9 October 1806, Foucart, *Campagne*, I, p. 448; Major Ameil to General Watier, 10 October 1806, Foucart, *Campagne*, I, p. 479; Berthier to Murat, 12 October 1806, Foucart, *Campagne*, I, p. 518; Berthier to Lannes, 12 October 1806, Foucart, *Campagne*, I, p. 519; Davout to Berthier, 12 October 1806, Foucart, *Campagne*, I, p. 531; Report Murat, 12 October 1806, Foucart, *Campagne*, I, p. 531; Report, Murat, 13 October 1806, Foucart, *Campagne*, I, p. 596; Murat to Berthier, 13 October 1806, Foucart, *Campagne*, I, p. 604; Napoleon to Berthier, 10 September 1806, *CN*, XIII, no. 10757; Napoleon to Lannes, 12 October 1806, Napoleon, *Correspondance*, XIII, no. 10982; Napoleon to Davout, 12 October 1806, *CN*, XIII, no. 10986. Also Creveld, *Command*, p. 68.
- 81 For Napoleon's errors on 12/13 October 1806 see Davout to Berthier, 13 October 1806, Davout, *Opérations*, p. 221; Napoleon to Murat, 13 October 1806, *CN*, XIII, no. 11000. Davout's letter proves Lettow-Vorbeck wrong when he writes that Davout was unaware that he would clash with the enemy on the morrow. See Lettow-Vorbeck, *Krieg*, I, p. 315. Elting's and Esposito's views that Davout did not make the threat clear enough to Berthier can be disputed on the basis of the same letter. See Elting and Esposito, *Atlas*, p. 62. Colin's claim that Napoleon had known before 13 October 1806 that Prussian forces stood at Jena, can be refuted on the basis of Napoleon's letter to Murat in the morning of 13 October 1806. See Napoleon to Murat, 13 October 1806, *CN*, XIII, no. 10995. Also Colin, *Transformations*, p. 274.
- 82 Berthier to Davout, 13 October 1806, Foucart, *Campagne*, I, p. 586; Report, Lannes, 13 October 1806, Foucart, *Campagne*, I, p. 592; Napoleon to Ney, 13 October 1806, *CN*, XIII, no. 11003.
- 83 Müffling, *Operationsplan*, p. 26; Rühle, *Bericht*, I, pp. 79–80. Also Lettow-Vorbeck, *Krieg*, I, pp. 154, 191, 193–4.
- 84 For the detachments see Müffling, *Operationsplan*, pp. 25, 27; Müffling, *Leben*, pp. 17–18; Rühle, *Bericht*, I, p. 73.
- 85 For Prussian reconnaissance and military intelligence see Clausewitz, *Nachrichten*, p. 100; Marwitz, *Jena*, p. 33; Müffling, *Operationsplan*, pp. 34–6; Müffling, *Leben*, p. 14; Rühle, *Bericht*, I, pp. 38, 133; Scharnhorst to his daughter, 2 October 1806, Scharnhorst, *Briefe*, p. 185. Also Elting and Esposito, *Atlas*, p. 58; Lettow-Vorbeck, *Krieg*, I, pp. 170, 267, 288, 290, 293, 296, 324, 331–2, 336–7; Petre, *Conquest*, p. 118. Blumen, for instance, recalled that officers on reconnaissance preferred holding picnics with charming ladies rather than looking for the enemy. See Blumen, *Jena*, pp. 13–15.
- 86 For the abundance of local resources see Soult to Napoleon, 10 October 1806, Foucart, *Campagne*, I, p. 484; Denis Charles Parquin, F. Masson (ed.), *Souvenirs du Capitaine Parquin* (Paris: Boussod, 1892), p. 16. Also Creveld, *Command*, pp. 60, 148–9; A. Pernot, *Aperçu Historique sur le Service des Transports Militaires* (Paris: Lavauzelle, 1894), pp. 121, 129, 131. For requisitioning see Order, Soult, 9 October 1806, Foucart, *Campagne*, I, p. 450; Order, Soult, 10 October 1806, Foucart, *Campagne*, I, p. 481; Berthier to Ney, 13 October 1806, Foucart, *Campagne*, I, p. 574; Berthier to Murat, 13 October 1806, Foucart, *Campagne*, I, pp. 574–5; Soult to commissaries, 13 October 1806, Foucart, *Campagne*, I, p. 606; Napoleon to Murat, 13 October 1806, *CN*, XIII, no. 10995. For plunder see Anon., *Reiterleben*, I, p. 134; Barrès, J.B.M. Barrès (ed.), *Memoirs of a Napoleonic Officer*, trans. B. Miall (London: Allen & Unwin, 1925), p. 86; Bertrand, *Mémoires*, p. 20; Marbot,

- Memoirs*, p. 177; Saint Chamans, *Mémoires*, p. 44. Also Elting, *Swords*, pp. 99, 433; Lefebvre, *Napoleon*, p. 218; Lettow-Vorbeck, *Krieg*, I, p. 75; Petre, *Conquest*, pp. 19, 222–3; Vachée, *Napoleon*, pp. 235–6.
- 87 Davout, *Opérations*, p. 16; Davout to Berthier, 12 October 1806, Foucart, *Campagne*, I, p. 531. Also Pernot, *Transports*, p. 129.
- 88 Not all corps received their due. Augereau complained about having received insufficient supplies, and the Guard infantry had to search for supplies in no-man's land the night before the battle of Jena. On the distribution of supplies at the outset of the campaign see Coignet, *Note-Books*, p. 132; Berthier to Napoleon, 24 September 1806, Foucart, *Campagne*, I, p. 141; Berthier to Soult, 3 October 1806, Foucart, *Campagne*, I, p. 277; Berthier to Lefebvre, 3 October 1806, Foucart, *Campagne*, I, p. 279; Soult to Napoleon, 7 October 1806, Foucart, *Campagne*, I, p. 378; Daru to Berthier, 7 October 1806, Foucart, *Campagne*, I, p. 388; Augereau to Napoleon, 8 October 1806, Foucart, *Campagne*, I, p. 405; Napoleon to Berthier, 10 September 1806, *CN*, XIII, no. 10758; Napoleon to General Dejean, 17 September 1806, *CN*, XIII, no. 10800, Napoleon to Berthier, 19 September 1806, *CN*, XIII, no. 10818. Also G. Lechartier, *Les Services de l'Arrière à la Grande Armée en 1806–1807* (Paris: Chapelot, 1910), pp. 327–8; Marshall-Cornwall, *Napoleon*, p. 156; Otto Meixner, *Historischer Rückblick auf die Verpflegung der Armeen im Felde* (Wien: Seidel, 1895), 2 vols, I, p. 71; Pernot, *Transport*, p. 121.
- 89 For the supply train see Berthier to General Songis, 1 October 1806, Mathieu Dumas, *Précis des Événements Militaires, ou Essais Historiques sur les Campagnes de 1799 à 1814* (Paris: Treuttel, 1817–1826), 19 vols, XV, p. 463; Napoleon to Berthier, 10 September 1806, *CN*, XIII, no. 10758; Decree, 3 April 1800, T.E. Thouvenin, *Historique Général du Train des Équipages Militaires* (Paris: Berger-Levrault, 1900), p. 27; Decree, 15 April 1806, Thouvenin, *Train*, p. 28. Also Elting, *Swords*, p. 563; Lettow-Vorbeck, *Krieg*, I, p. 64; Thouvenin, *Train*, pp. 19–21. Proper train battalions were established in 1807. See Decree, 26 March 1807, Thouvenin, *Train*, pp. 33–4. Also Elting, *Swords*, p. 565; Henri de Nanteuil, 'Logistische Probleme der napoleonischen Kriegführung', Wolfgang von Groote and KlausJürgen Müller (eds), *Napoleon I. und das Militärwesen seiner Zeit* (Freiburg: Rombach, 1968), pp. 37–65, p. 38.
- 90 Elting and Esposito, *Atlas*, p. 63; Foucart, *Campagne*, I, p. 551.
- 91 Lechartier, *Services*, p. 239; Meixner, *Verpflegung*, I, p. 75.
- 92 For the reduction of trains and camp-followers see Order, Soult, 30 September 1813, Foucart, *Campagne*, I, pp. 227–9; Order, Berthier, 3 October 1806, Foucart, *Campagne*, I, pp. 270–1; Order, Berthier, 11 October 1806, Foucart, *Campagne*, I, p. 511. Also Elting, *Swords*, pp. 605–6.
- 93 For the centres of operations see Berthier to General Songis, 1 October 1806, Dumas, *Précis*, XV, pp. 456–7; Berthier to Davout, 2 October 1806, Foucart, *Campagne*, I, p. 268; Berthier to Daru, 3 October 1806, Foucart, *Campagne*, I, pp. 281–2; Berthier to Villemazy, 13 October 1806, Foucart, *Campagne*, I, p. 570; Napoleon to Berthier, 20 September 1806, *CN*, XIII, no. 10837; Napoleon to Berthier, 1 October 1806, *CN*, XIII, no. 10929. Also Colin, *Transformations*, p. 236; Lechartier, *Services*, pp. 243–5, 251–2, 259, 261; Lettow-Vorbeck, *Krieg*, I, pp. 72–3; Meixner, *Verpflegung*, I, p. 70; Petre, *Conquest*, p. 55.
- 94 For supply and lines of communications see Napoleon to Berthier, 9 September 1806, *CN*, XIII, no. 10756; Napoleon to General Dejean, 17 September 1806, *CN*, XIII, no. 10800; Napoleon to Berthier, 30 September 1806, *CN*, XIII, no. 10909. Also Elting, *Swords*, pp. 553–71; Lechartier, *Services*, pp. 244, 249, 261.
- 95 For the Prussian supply system see Major Eberhardt to his wife, 3 October 1806, F.W.M. von Eberhardt, M. von Eberhardt (ed.), *Aus Preußens schwerer Zeit: Briefe und Aufzeichnungen meines Urgroßvaters und Großvaters* (Berlin: Eisenschmidt, 1907), p. 49; Marwitz, *Jena*, pp. 33, 42; Rühle, *Bericht*, I, pp. 36, 89, 124. Also Kiesling, *Geschichte*, pp. 10, 12; Lettow-

- Vorbeck, *Krieg*, I, pp. 59–60, 208, 262–2, 289, II, p. 19; Meixner, *Verpflegung*, I, pp. 72–3, 75; Nanteuil, ‘Probleme’, p. 66.
- 96 The fear that individual foraging might undermine discipline was not unwarranted. French marshals and officers struggled to keep their men in check. See Davout, *Opérations*, p. 60; Order, Soult, 30 September 1806, Foucart, *Campagne*, I, p. 231; Order, Soult, 10 October 1806, Foucart, *Campagne*, I, p. 481; Saint Chamans, *Mémoires*, p. 34. Also Lettow-Vorbeck, *Krieg*, I, pp. 74–5; Petre, *Conquest*, pp. 222–3; Vachée, *Napoleon*, pp. 235–6.
- 97 For the prohibition of requisitioning see Blumen, *Jena*, p. 21; Borcke, *Kriegerleben*, pp. 18–19, 24; Boyen, *Erinnerungen*, I, p. 133; Clausewitz, *Nachrichten*, p. 136; Prussia, *Infanterie 1788*, pp. 540–2, 571–5. The Poland campaign 1793/94, in contrast, had seen the Prussian army living of requisitions since attitudes of the local population could be ignored. See Boyen, *Erinnerungen*, I, pp. 49, 67. Also Delbrück, *Aufsätze*, pp. 232–3; Goltz, *Roßbach*, pp. 296–7; Lettow-Vorbeck, *Krieg*, I, pp. 60, 262.
- 98 For the baggage train and camp-followers see Borcke, *Kriegerleben*, p. 368; Boyen, *Erinnerungen*, I, pp. 132, 136; Fezensac, *Souvenirs*, p. 108; Prussia, *Infanterie 1788*, pp. 382–91, 396–8; Reiche, *Memoiren*, pp. 225–6; Rühle, *Bericht*, I, p. 37. Also Jany, *Kavalleriedienst*, pp. 62, 68–9; Lettow-Vorbeck, *Krieg*, I, p. 52; Meixner, *Verpflegung*, I, pp. 72–3.
- 99 For the impact of supply organization and equipment on the retreat see Anon., *Erinnerungen*, I, p. 4; Borcke, *Kriegerleben*, p. 50; Clausewitz, *Nachrichten*, pp. 135–6. In addition to the baggage, the heavy guns of the Prussian army contributed to lowering the rate of advance. See Borcke, *Kriegerleben*, pp. 2, 27.
- 100 On the role of corps in the pursuit see Petre, *Conquest*, p. 302.
- 101 For French tactical organization see Napoleon to General Dejean, 4 September 1806, *CN*, XIII, no. 10734. Also Elting, *Swords*, pp. 231–2, 250–8; Lettow-Vorbeck, *Krieg*, I, Annex, no. 3.
- 102 For the French battle plan see Order, Napoleon, 14 October 1806, *CN*, XIII, no. 11004. For a general description of the battles of Jena and Auerstädt see Davout, *Opérations*, pp. 34–47; Müffling, *Operationsplan*, pp. 38–47; Rühle, *Bericht*, I, pp. 166–212. Also Lettow-Vorbeck, *Krieg*, I, pp. 340–404; Marshall-Cornwall, *Napoleon*, pp. 160–3. For French tactics see Anon., *Erinnerungen*, I, pp. 7, 11–13; Borcke, *Kriegerleben*, pp. 30–4; Boyen, *Erinnerungen*, I, p. 139; General Friant to Davout, 17 October 1806, Davout, *Opérations*, p. 223; Davout, *Opérations*, pp. 36, 38, 41; Report, General Victor, no date, Foucart, *Campagne*, I, pp. 625–8; Report, General Foucher, 18 October 1806, Foucart, *Campagne*, I, p. 635; General Lariboisière to General Songis, 14 November 1806, Foucart, *Campagne*, I, pp. 642–3; Ney to Napoleon, 19 October 1806, Foucart, *Campagne*, I, pp. 647–8; Report, Colonel Bicquelley, 8 November 1806, Foucart, *Campagne*, I, pp. 650–1; Augereau to Berthier, 14 October 1806, Foucart, *Campagne*, I, pp. 651–7; Report, Colonel Vergès, no date, Foucart, *Campagne*, I, p. 685; Report, General Grandeau, 15 October 1806, Foucart, *Campagne*, I, p. 689; Report, Colonel Charbonnel, 26 October 1806, Foucart, *Campagne*, I, pp. 691–2; Marwitz, *Jena*, pp. 55, 57–9, 65, 67, 71; Müffling, *Operationsplan*, p. 43; Napoleon, *Maxims*, pp. 72–3; Rühle, *Bericht*, I, p. 191. Also Druène, ‘Napoleon’, p. 47; Lettow-Vorbeck, *Krieg*, I, pp. 356–7, 366, 381, 399, 404; Maude, *Jena*, pp. 154–6, 158; Petre, *Conquest*, pp. 22–3, 128–1, 134, 137, 141, 154, 158.
- 103 For figures see Elting and Esposito, *Atlas*, p. 66. According to Elting and Esposito, 48,000 Prussians with 179 guns faced 96,000 French, 40,000 of whom had not been engaged, with 104 guns at Jena. The Prussians lost 11,000 in dead and wounded and 15,000 prisoners, the French had 5,000 casualties. At Auerstädt, 63,500 Prussians with 230 guns fought 26,000 French with 44 guns. The Prussians had 12,000 casualties and 3,000 prisoners compared to French losses of 8,000. See Elting and Esposito, *Atlas*, p. 66. Figures are disputed. For other estimates see Lettow-Vorbeck, *Krieg*, I, Annex nos 3–6; Petre, *Conquest*, pp. 175–80.

- 104 For accounts on the Prussian retreat and the French pursuit see Anon., *Erinnerungen*, I, p. 21; Anon., *Reiterleben*, I, pp. 114–16, 123; Blumen, *Jena*, pp. 24–34; Clausewitz, *Nachrichten*, p. 135; Davout, *Opérations*, p. 48; Report, General Victor, no date, Foucart, *Campagne*, I, p. 629; Davout to Napoleon, 14 October 1806, Foucart, *Campagne*, I, p. 672; George de Grouchy, *Mémoires du Maréchal de Grouchy* (Paris: Dentu, 1873), 5 vols, I, p. 244; Herwig, *Erinnerungen*, pp. 16–20; Louis Francois Lejeune, *Aide-de-Camp Memoirs of Baron Lejeune, Aide-de-Camp to Marshals Berthier, Davout, and Oudinot*, trans. A. Bell (London: Longman, 1897), 2 vols, I, p. 25; Marwitz, *Jena*, pp. 78–80; Müffling, *Operationsplan*, pp. 47–52; Parquin, *Souvenirs*, p. 21; Rühle, *Bericht*, I, pp. 209–12; Saint Chamans, *Mémoires*, p. 41; Suckow, *Soldatenleben*, pp. 67–80. Also Elting and Esposito, *Atlas*, p. 66; Lettow-Vorbeck, *Krieg*, I, pp. 370, 397–400, E, pp. 1–52; Petre, *Conquest*, pp. 146–253. For Napoleon's view on the importance of pursuit see Napoleon, *Military Maxims*, p. 73.
- 105 On French training standards see Elting, *Swords*, pp. 60–1, 534; Elting and Esposito, *Atlas*, p. 57; Lefebvre, *Napoleon*, p. 218; Vachée, *Napoleon*, pp. 219–20.
- 106 On Scharnhorst's ideas on divisions see Goltz, *Roßbach*, pp. 274–5; Lettow-Vorbeck, *Krieg*, I, p. 57.
- 107 For Prussian tactical command and control see Anon., *Erinnerungen*, I, pp. 15, 17; Blumen, *Jena*, p. 23; Wedel, *Lebenserinnerungen*, I, p. 41.
- 108 Prussia, *Infanterie 1788*, pp. 185–90.
- 109 On Prussian tactical organization see Goltz, *Roßbach*, pp. 112, 129; Lettow-Vorbeck, *Krieg*, I, pp. 45, 56–7, 267, 379, 387–8. For Prussian tactics see Anon., *Erinnerungen*, I, p. 9; Anon., *Reiterleben*, I, pp. 92–4, 129, 154; Blumen, *Jena*, pp. 23–4; Henckel, *Erinnerungen*, p. 46; Report, Cuirassier Regiment Beeren, Jany, *Kavalleriedienst*, p. 83; Report, Dragoon Regiment Irwing, Jany, *Kavalleriedienst*, pp. 92–4; Report, Hussar Regiment Blücher, Jany, *Kavalleriedienst*, pp. 94–6; Marwitz, *Jena*, pp. 37, 54, 57–8; Rühle, *Bericht*, I, pp. 178, 182; Scharnhorst to his daughter, 16 October 1806, Scharnhorst, *Briefe*, pp. 286–7; Wedel, *Lebenserinnerungen*, I, p. 41. Also Goltz, *Roßbach*, p. 278; Jany, *Kavalleriedienst*, p. 3; Lettow-Vorbeck, *Krieg*, I, pp. 357, 366, 372, 374, 385, 389, 391–3, 404; Maude, *Jena*, p. 157; Petre, *Conquest*, pp. 135, 138, 155, 157, 159, 161, 178.
- 110 Anon., *Erinnerungen*, I, pp. 6, 10, 12; Wedel, *Lebenserinnerungen*, I, p. 40.
- 111 Prussia, *Infanterie 1788*, p. 545.
- 112 For Prussian officer training see Marbot, *Memoirs*, pp. 175–6; Minutoli, *Erinnerungen*, pp. 3–5. Also Goltz, *Roßbach*, pp. 113–14, 173.
- 113 For the spirit of spit and polish see Borcke, *Kriegerleben*, pp. 4–5; Boyen, *Erinnerungen*, I, p. 109; Prussia, *Infanterie 1788*, pp. 44–8, 545.
- 114 Boyen, *Erinnerungen*, I, pp. 128–9.
- 115 Borcke, *Kriegerleben*, p. 3.
- 116 For Prussian training see Borcke, *Kriegerleben*, pp. 17, 23; Boyen, *Erinnerungen*, I, pp. 104, 109, 174; Henckel, *Erinnerungen*, pp. 8, 11, 20–2, 38; Marbot, *Memoirs*, p. 175; Suckow, *Soldatenleben*, pp. 15, 41, 46, 61–3. Also Goltz, *Roßbach*, pp. 269–72; Jany, *Kavalleriedienst*, pp. 4, 7, 15, 63, 66; Lettow-Vorbeck, *Krieg*, I, pp. 46–7; Maude, *Jena*, pp. 14, 17–19, 26.

## 4

## PRUSSIAN REFORMS

- 1 Knesebeck to Lieutenant Preuss, 13 October 1807, Schwertfeger, 'Die Neugestaltung der preußischen Armee in den Jahren 1807 bis 1812', *Beiheft zum Militär-Wochenblatt*, no. 12 (1909), pp. 445–76, 446.

- 2 On the question of patriotism and indifference see Chapter 3.
- 3 Duffy, *Military Life*, p. 296. Local resistance by East Prussian peasants against the Russian army in 1758 seems to have been a spontaneous backlash against plunder and extortion. See Legahn, 'Partisanen', pp. 161–70.
- 4 Memorandum, Hardenberg, 12 September 1807, Leopold von Ranke, *Denkwürdigkeiten des Staatskanzlers Fürsten von Hardenberg* (Leipzig: Duncker, 1877), 5 vols, III, p. 8. On 'bureaucratic nationalism' see Matthew Levinger, *Enlightened Nationalism: The Transformation of Prussian Political Culture, 1806–1848* (New York: Oxford University Press, 2000), pp. 5, 49, 60–2, 66–7; Rosenberg, *Bureaucracy*, p. 203.
- 5 On general reform programmes see Thomas Nipperdey, *Deutsche Geschichte: 1800–1866* (München: Beck, 1984), pp. 31–6; Schissler, *Agrargesellschaft*, pp. 115–16; Schwertfeger, 'Neugestaltung', pp. 446–8.
- 6 On the philosophical background of the reforms see Baker, *Revolution*, pp. 120–1; Levinger, *Nationalism*, p. 36.
- 7 Memorandum, Stein, June 1807, Heinrich Friedrich Carl vom und zum Stein, E. Botzenhart (ed.), *Freiherr vom Stein: Briefwechsel, Denkschriften und Aufzeichnungen* (Berlin: Heymanns, 1936), 8 vols, II, pp. 210–31; Proklamation, Stein, 26 September 1808, Stein, *Briefwechsel*, II, pp. 530–1; Politisches Testament, Stein, 24 November 1808, Stein, *Briefwechsel*, II, pp. 583–6.
- 8 For a comparison of Stein's and Hardenberg's programmes see Walter M. Simon, *The Failure of the Prussian Reform Movement: 1807–1819* (New York: Cornell University Press, 1955), pp. 4, 51–2, 95.
- 9 Memorandum, Hardenberg, 12 September 1807, Ranke, *Hardenberg*, III, pp. 7–58. Stein and Hardenberg were not the only civil reformers with a clear programme, but they were the most influential ones. See Nipperdey, *Geschichte*, p. 44; Schissler, *Agrargesellschaft*, p. 117; Simon, *Reform*, p. 19.
- 10 On courtiers' hostility and obstruction see Simon, *Reform*, pp. 12–13, 29, 32. For the resistance and obstruction by the nobility see Boyen, *Erinnerungen*, I, pp. 255, 334–5; Stein to Schroetter, 27 June 1808, Heinrich Friedrich Carl vom und zum Stein, Erich Botzenhart and Walther Hubatsch (eds), *Freiherr vom Stein: Briefe und amtliche Schriften* (Stuttgart: Kohlhammer, 1960) 12 vols, II, p. 800; Stein to Bismarck, 27 August 1808, Stein, *Briefe*, H, pp. 840–1; Stein to Crauss, 10 November 1808, Stein, *Briefe*, II, p. 936. Also Marion W. Gray, *Prussia in Transition: Society and Politics under the Stein Reform Ministry of 1808* (Philadelphia: American Philosophical Society, 1986), p. 144; Levinger, *Nationalism*, p. 59; Nipperdey, *Geschichte*, pp. 45, 67; Schissler, *Agrargesellschaft*, p. 124; Simon, *Reform*, pp. 12, 24, 68, 80, 84. The opposition of bureaucrats sympathizing with the rural nobility went so far as to 'lose' royal decrees. See Boyen, *Erinnerungen*, I, pp. 324–5. For the resistance of the officer corps against meritocracy see Scharnhorst to General Tauentzien, March 1810, Gerhard Johann David von Scharnhorst, Lehmann (ed.), 'Vier Denkschriften Scharnhorsts aus dem Jahre 1810', *Historische Zeitschrift*, Vol. LVIII (1887), pp. 55–105, 90–1; Memorandum, General Grawert, 27 September 1808, Großer Generalstab, 'Die Reorganisation der preußischen Armee nach dem Tilsiter Frieden', *Beihefte zum Militärwochenblatt* (Berlin: Mittler, 1854–1862), 2 vols, II, pp. 608–21. Also Peter Paret, *Yorck and the Era of Prussian Reform: 1807–1815* (Princeton: Princeton University Press, 1966), p. 132; Schwertfeger, 'Neugestaltung', pp. 461–2; Simon, *Reform*, pp. 12, 154. The conservatism of the indigenous nobility becomes apparent from the fact that many reformers did not belong to the old Prussian families. Stein came from Nassau, Hardenberg and Scharnhorst from Hanover, Gneisenau and Grolman from minor German states, Boyen's family was of Dutch origin. The reform-supporter Blücher was a born Swede. On towns' opposition to civil reforms see Nipperdey, *Geschichte*, p. 49. On the serfs' attitude towards agricultural reform see Nipperdey, *Geschichte*, p. 42. For the resistance against conscription see Hermann von Boyen, *Beiträge zur Kenntnis des General von Scharnhorst* (Berlin:

- Dümmler, 1833), p. 19; Marwitz, *Edelmann*, I, pp. 442–3, 497. Also Heribert Händel, *Der Gedanke der allgemeinen Wehrpflicht in der Wehrverfassung des Königreiches Preußen bis 1819* (Frankfurt: Mittler, 1962), pp. 77–9; Paret, *Yorck*, p. 133; Schissler, *Agrargesellschaft*, pp. 123–4; Simon, *Reform*, p. 166; Wohlfeil, ‘Heer’, pp. 121, 128. Opposition to conscription was not universal, however. Goetzen reported from Silesia in 1808 that the idea of conscription was generally accepted. Though Goetzen’s enthusiastic report has to be read with caution since he, like Gneisenau, had a tendency for over-optimism, the resistance of the Silesian fortresses and irregular formations during the war of 1806/07 had demonstrated a particularly martial spirit among the Silesian population. See Goetzen to Gneisenau, 1 December 1808, Vaupel, *Heer*, p. 749.
- 11 For the resistance to the *Landsturm* see Yorck to unknown, September 1808, Vaupel, *Heer*, p. 587. Also Paret, *Yorck*, p. 156; Simon, *Reform*, pp. 168–79.
- 12 For intrigues against the reformers see Boyen, *Erinnerungen*, I, pp. 227, 229, 249, 256–7, 264–5; Gneisenau to Frederick William, 14 January 1808, August Wilhelm Anton Neidhardt von Gneisenau, K. Griewank (ed.), *Gneisenau: Ein Leben in Briefen* (Leipzig: Koehler, 1939), pp. 87–8; Gneisenau to Goetzen, 24 November 1808, Gneisenau, *Leben*, p. 98; Gneisenau to his wife, 26 May 1809, Gneisenau, *Leben*, p. 110; Scharnhorst to Frederick William, 4 December 1808, Scharnhorst, *Briefe*, pp. 352–3; Scharnhorst to General Zeschau, 12 November 1810, Scharnhorst, *Briefe*, pp. 407–9; Politisches Testament, Stein, 24 November 1808, Stein, *Briefwechsel*, II, p. 586; Reden to Stein, 24 September 1808, Stein, *Briefe*, II, p. 875; Gneisenau to Frederick William, 14 January 1808, Vaupel, *Heer*, p. 243. Also Gray, *Prussia*, pp. 145–9; Schissler, *Agrargesellschaft*, pp. 119–21; Simon, *Reform*, p. 34.
- 13 For Yorck’s relations to social reformers see Yorck to Lieutenant Colonel von Oppen, 26 November 1808, Vaupel, *Heer*, p. 742. Also Joseph Friedrich Theodor von Zwehl, ‘Der Gegensatz zwischen Yorck und Gneisenau’, *Beiheft zum Militärwochenblatt*, no. 10 (1914), pp. 403–69, 408.
- 14 For the hostility among bureaucrats towards conscription see Stein to Staegemann, June 1808, Stein, *Briefe*, II, p. 772; Vincke to Stein, 30 September 1808, Vaupel, *Heer*, p. 598; Niebuhr to Altenstein, 5 November 1808, Vaupel, *Heer*, p. 673. Also Simon, *Reform*, p. 156.
- 15 The Prussian army was restricted to 22,000 infantry, 8,000 cavalry, 6,000 artillery and 6,000 Guards Militia were prohibited. For the Treaty of Paris see Treaty of Paris, 8 September 1808, M. de Clercq (ed.), *Recueil des Traités de la France* (Paris: Amyot, 1864), 6 vols, II, pp. 270–3. Also Jany, *Armee*, IV, p. 21; Schwertfeger, ‘Neugestaltung’, pp. 447, 453; Stübig, *Scharnhorst*, pp. 64–5.
- 16 On Prussian insolvency see Gneisenau to Goetzen, 24 November 1808, August Wilhelm Anton Neidhardt von Gneisenau, J. von Pflugk-Harttung (ed.), *Briefe des Generals Neidhardt von Gneisenau: 1809–1815* (Gotha: Perthes, 1913), p. 113; Scharnhorst to Ompteda, 25 October 1807, Scharnhorst, *Briefe*, p. 331; Scharnhorst to his daughter, 1 November 1812, Scharnhorst, *Briefe*, p. 440; Memorandum, Stein, 21 September 1808, Stein, *Briefwechsel*, II, p. 523. Also Jany, *Armee*, IV, p. 8; Levinger, *Nationalism*, p. 44; Schissler, *Agrargesellschaft*, p. 20.
- 17 Boyen, *Erinnerungen*, I, p. 361.
- 18 For the impact of austerity measures on the army see Blumen, *Jena*, p. 61; Decree, 11 February 1808, Vaupel, *Heer*, pp. 250–1; Military Reorganization Commission to Frederick William, 24 February 1808, Vaupel, *Heer*, pp. 275–7. Also Jany, *Armee*, IV, pp. 8, 19–21, 39–40.
- 19 For the reformers’ leverage on the basis of need for revenue see Memorandum, Stein, June 1807, Stein, *Briefwechsel*, II, pp. 210–31. Also Levinger, *Nationalism*, p. 46; Simon, *Reform*, p. 14.
- 20 On the impact of Stein’s dismissal on the reform process see Gray, *Prussia*, pp. 144–9, 150, 157; William O Shanahan, *Prussian Military Reforms: 1786–1813* (New York: Columbia

- University Press, 1945), p. 158; Simon, *Reform*, pp. 34, 37. The king limited the damage of Scharnhorst's forced dismissal by granting him continued influence behind the scenes. See Scharnhorst to Frederick William, 18 March 1810, Scharnhorst, *Briefe*, pp. 387–8; Scharnhorst to Colonel Hake, 1810, Scharnhorst, *Briefe*, pp. 399–400.
- 21 For the resignations of Prussian officers see Boyen, *Erinnerungen*, I, p. 429; Gneisenau to Münster, 10 March 1812, Gneisenau, *Leben*, pp. 182–3; Louis Alexandre Andrault de Langeron, L.G.F. (ed.), *Mémoires de Langeron, Général d'Infanterie dans l'Armée Russe: Campagnes de 1812, 1813, 1814* (Paris: Picard, 1902), p. 143; Reiche, *Memoiren*, p. 235. Also Craig, *Politics*, pp. 54–8; Großer Generalstab, 'Reorganisation', I, pp. 42–4.
- 22 Büsching to Stein, 26 April 1808, Stein, *Briefe*, II, pp. 714–16.
- 23 This law was later amended.
- 24 For the texts of the laws see Ernst Rudolf Huber (ed.), *Dokumente zur deutschen Verfassungsgeschichte*, 2nd improved edition (Stuttgart: Kohlhammer, 1961–1966), 3 vols, I, pp. 39–6; Stein, *Briefe*, II, pp. 947–79; Fritz Stier-Somlo (ed.), *Sammlung preußischer Gesetze staats- und verwaltungsrechtlichen Inhalts*, 5th improved edition (München: Beck, 1927), pp. 1–33.
- 25 Gray, *Prussia*, p. 154; Nipperdey, *Geschichte*, p. 48; Schissler, *Agrargesellschaft*, pp. 105–10; Simon, *Reform*, pp. 7–8, 20–3, 88, 91–7; Trebilcock, *Industrialization*, pp. 34–5.
- 26 Gray, *Prussia*, p. 152; Nipperdey, *Geschichte*, pp. 44, 48.
- 27 Gray, *Prussia*, p. 154; Schissler, *Agrargesellschaft*, p. 108.
- 28 Nipperdey, *Geschichte*, pp. 36–7, 50; Rosenberg, *Bureaucracy*, p. 228; Schissler, *Agrargesellschaft*, p. 143. Nipperdey called the new distribution of power between king and bureaucracy 'bureaucratic-royal dualism' ('bürokratisch-monarchische Doppelführung'). See Nipperdey, *Geschichte*, p. 36.
- 29 Nipperdey, *Geschichte*, pp. 36–40, 50, 67–8; Simon, *Reform*, pp. 63–6, 106–7.
- 30 For a summary of the causes of failure see Boyen, *Erinnerungen*, I, pp. 233–4. Also Simon, *Reform*, pp. 4–5, 11.
- 31 For a comparison of French and Prussian reforms see Levinger, *Nationalism*, p. 31; Rosenberg, *Bureaucracy*, p. 204.
- 32 'Mit Gott für König und Vaterland'.
- 33 For a comparison between Prussian and French nationalism see Emsley, 'Rhetoric', p. 39; Lynn Hunt, *Politics, Culture, and Class in the French Revolution* (Berkeley: University of California Press, 1984), pp. 27, 123–4; Levinger, *Nationalism*, pp. 48, 229, 233.
- 34 The Military Reorganization Commission included Scharnhorst, Bronikowsky, Gneisenau, Massenbach, Lottum, Grolman, Borstell, and Roedlich. Bronikowsky was later replaced by Boyen, Borstell by Goetzen. Clausewitz was Scharnhorst's assistant but not a member of the Commission. See Stübig, *Scharnhorst*, pp. 66–7. The junior rank of most members of the commission is striking. Apart from Scharnhorst and Massenbach, all members were lieutenant colonels. It looks as if the king had lost confidence in his general officers.
- 35 Memorandum, Frederick William, July 1807, Vaupel, *Heer*, pp. 8–15.
- 36 Memorandum, Prince August of Prussia, 13 June 1807, Georg Heinrich Klippel, *Das Leben des Generals von Scharnhorst* (Leipzig: Brockhaus, 1869–1871), 3 vols, III, pp. 764–92.
- 37 Like the civil reformers, they considered reforms instrumental for the survival of the monarchy. Revolutionary ideas such as human rights, sovereignty of the nation, division of power, and social equality were not part of their programme. See Händel, *Wehrpflicht*, pp. 67, 73–4, 76, 87.
- 38 Scharnhorst and Gneisenau were, however, ardent nationalists themselves. See Levinger, *Nationalism*, p. 41. The same is true for Blücher. See Blücher to Scharnhorst, 5 January 1813, Gebhardt Lebrecht von Blücher, W.von Unger (ed.), *Blüchers Briefe* (Berlin: Cotta, 1913), p. 153.
- 39 'Alle Bewohner des Staates sind geborne [*sic*] Verteidiger desselben.' See Memorandum, Scharnhorst, 31 August 1807, Großer Generalstab, 'Reorganisation', I, p. 82.

- 40 On the ideas behind universal conscription see Military Reorganization Commission to Frederick William, 25 September 1807, Großer Generalstab, 'Reorganisation', I, p. 62; Military Reorganization Commission to Frederick William, October 1807, Großer Generalstab, 'Reorganisation', I, pp. 66–8; Memorandum, Scharnhorst, 31 July 1807, Großer Generalstab, 'Reorganisation', I, pp. 77–85; Memorandum, Scharnhorst, 31 August 1807, Großer Generalstab, 'Reorganisation', I, pp. 89–93; Scharnhorst to Clausewitz, 27 November 1807, Scharnhorst, *Briefe*, p. 335; Memorandum, Scharnhorst, November 1810, Scharnhorst, 'Denkschriften', pp. 102–4; Clausewitz to unknown, 1809, Schwertfeger, 'Neugestaltung', p. 456; Stein to Staegemann, June 1808, Stein, *Briefe*, II, p. 772; Koenen to Frederick William, 26 May 1808, Vaupel, *Heer*, p. 410; Notes, Grolman, 22 August 1807, Vaupel, *Heer*, p. 63; Military Reorganization Commission to Frederick William, 31 August 1807, Vaupel, *Heer*, pp. 82–3; Military Reorganization Commission to Frederick William, 20 December 1808, Vaupel, *Heer*, pp. 819–20. Also Craig, *Politics*, p. 41; Händel, *Wehrpflicht*, p. 82; Nipperdey, *Geschichte*, pp. 52–4; Paret, *Yorck*, p. 137; Simon, *Reform*, pp. 145, 148; Stübig, *Scharnhorst*, p. 78.
- 41 For the reform of military punishment, discipline and justice see Blumen, *Jena*, p. 62; Boyen, *Erinnerungen*, I, pp. 244–6; Decree, 3 August 1808, Großer Generalstab, 'Reorganisation', II, pp. 578–90; Military Reorganization Commission to Frederick William, October 1807, Großer Generalstab, 'Reorganisation', I, pp. 68–9; Stein to Gneisenau, 1808, Stein, *Briefwechsel*, II, p. 452; Scharnhorst to Stein, 3 July 1808, Stein, *Briefwechsel*, II, p. 457; Notes, Grolman, 24 August, 1807, Vaupel, *Heer*, p. 64; Military Reorganization Commission to Frederick William, 6 April 1808, Vaupel, *Heer*, pp. 361–5; Koenen to the Military Reorganization Commission, 13 April 1808, Vaupel, *Heer*, pp. 370–5; Military Reorganization Commission to Koenen, 22 April 1808, Vaupel, *Heer*, pp. 385–6; Koenen to Frederick William, 26 May 1808, Vaupel, *Heer*, pp. 409–37. Also Jany, *Armee*, IV, p. 34; Stübig, *Scharnhorst*, pp. 79–83; Wohlfeil, 'Heer', p. 137. Clausewitz's ideal was to see every soldier motivated by a patriotic warrior spirit. See Clausewitz to Fichte, 11 January 1809, Johann Gottlieb Fichte, H. Schulz (ed.), *Machiavelli* (Leipzig: Meiner, 1918), pp. 62–4. This fine sentiment clashed with reality. Blumen, a Prussian infantry officer, noted that troops were not yet ripe for appeals to honour. Discipline in his battalion was temporarily eroded after the abolition of corporal punishment. See Blumen, *Jena*, p. 69.
- 42 On Stein's and Schön's opposition to the tripartition of the armed forces see Notes, Stein, 31 August 1807, Großer Generalstab, 'Reorganisation', I, p. 95; Notes, Stein, 5 January 1808, Stein, *Briefwechsel*, II, p. 345; Memorandum, Schön, 4 December 1807, Vaupel, *Heer*, pp. 201–2.
- 43 The volunteer *Jäger* detachments, one of which was allocated to each regiment, should not be confused with the regular *Jäger* regiment. On the *Jäger* formations see Clausewitz to Colonel Hake, 23 July 1811, Carl Phillip Gottlieb von Clausewitz, W. Hahlweg (ed.), *Schriften, Aufsätze, Studien, Briefe* (Göttingen: Vandenhoeck, 1966), p. 185. Also Stübig, *Scharnhorst*, pp. 94–5.
- 44 On the role of *Landwehr* to accustom hitherto-exempt classes to military service see Stübig, *Scharnhorst*, p. 95.
- 45 Even the law of 1814 continued to grant the educated strata privileges. See Huber, *Verfassungsgeschichte*, I, pp. 48–55; Friedrich Meinecke, *Das Leben des Generalfeldmarschalls Hermann von Boyen* (Stuttgart: Cotta, 1896–1899), 2 vols, I, pp. 417–22.
- 46 For the *Krümper* system see Blumen, *Jena*, pp. 77–8; Boyen, *Erinnerungen*, I, p. 358; Decree, 25 July 1808, Großer Generalstab, 'Reorganisation', I, p. 401; Reiche, *Memoiren*, pp. 222–3; Scharnhorst to Frederick William, 16 July 1810, Scharnhorst, 'Denkschriften', p. 84; Decree, 6 August 1808, Vaupel, *Heer*, p. 542; Notes, Grolman, 7 September 1807, Vaupel, *Heer*, p. 66; Military Reorganization Commission to Frederick William, 25 September 1807, Vaupel, *Heer*, p. 104. Also Jany, *Armee*, IV, pp. 13, 41, 53; Shanahan,



- Reforms*, pp. 13–16, 110, 159–61; Stübiger, *Scharnhorst*, p. 77; Wohlfeil, ‘Heer’, p. 122. Strangely, Boyen states that the Krümper system was invented in order to bypass the treaty limitations. See Boyen, *Erinnerungen*, I, p. 253. Grolman’s notes of 7 September 1807 and the decrees of 25 July and 6 August 1808, all of which antedated the Treaty of Paris, prove the contrary.
- 47 For arms production see Boyen, *Erinnerungen*, I, pp. 255, 364, 423; Clausewitz to Frederick William, 15 October 1810, Clausewitz, *Aufsätze*, pp. 134–5; Reiche, *Memoiren*, p. 224; Memorandum, Scharnhorst, 28 January 1810, Scharnhorst, ‘Denkschriften’, pp. 71–2; Scharnhorst to Frederick William, 16 July 1810, Scharnhorst, ‘Denkschriften’, p. 73; Frederick William to Goetzen, 14 December 1808, Vaupel, *Heer*, p. 787. Also Jany, *Armee*, IV, p. 42.
- 48 For an assessment of the army’s loyalties after the reforms see Nipperdey, *Geschichte*, pp. 55–6; Wohlfeil, ‘Heer’, pp. 130, 152. For the influence of the French Revolution on the reformers see Händel, *Wehrpflicht*, p. 87.
- 49 For plans for the militarization of schools see Memorandum, Gneisenau, 31 August 1807, Großer Generalstab, ‘Reorganisation’, I, pp. 94–5; Military Reorganization Commission to Stein, November 1807, Vaupel, *Heer*, p. 186.
- 50 ‘Gott mit uns.’
- 51 For the ideas behind the reform of the officer corps see Memorandum, Military Reorganization Commission, 1808, Großer Generalstab, ‘Reorganisation’, II, p. 496; Military Reorganization Commission to Frederick William, 25 September 1807, Vaupel, *Heer*, p. 101. Also Werner Hahlweg, *Preußische Reformzeit und revolutionärer Krieg* (Frankfurt: Mittler, 1962), p. 24; Schwertfeger, ‘Neugestaltung’, pp. 456–7; Wohlfeil, ‘Heer’, pp. 105, 134, 139–40, 150.
- 52 On ideas to boost morale by rewards and punishment see Decree, 21 April 1813, Maximilian Blumenthal, *Der preußische Landsturm von 1813* (Berlin: Schröder, 1900), pp. 168, 176; Notes, Grolman, 1807, Vaupel, *Heer*, p. 70; Military Reorganization Commission to Frederick William, 17 April 1808, Vaupel, *Heer*, p. 381; Memorandum, Gneisenau, August 1808, Vaupel, *Heer*, pp. 550–1; Memorandum, Gneisenau, August 1808, Vaupel, *Heer*, pp. 554–5; Memorandum, Scharnhorst, August 1808, Vaupel, *Heer*, pp. 555–6.
- 53 In this context, Boyen spoke of a struggle of annihilation (*Vernichtungskampf*). See Boyen, *Erinnerungen*, I, pp. 283, 344.
- 54 See Decree, 21 April 1813, Blumenthal, *Landsturm*, pp. 168, 176; Memorandum, Scharnhorst, August 1808, Vaupel, *Heer*, p. 562. Scharnhorst probably meant social rather than physical destruction.
- 55 I am grateful to Professor Brian Bond for this suggestion.
- 56 For new mode of selection and promotion see Notes, Grolman, 22 August 1807, Vaupel, *Heer*, p. 63; Notes, Grolman, 5 September 1807, Vaupel, *Heer*, p. 65; Military Reorganization Commission to Frederick William, 31 August 1807, Vaupel, *Heer*, p. 84; Military Reorganization Commission to Frederick William, 25 September 1807, Vaupel, *Heer*, pp. 99–101; Military Reorganization Commission to Frederick William, 30 July 1808, Vaupel, *Heer*, pp. 534–6. Also Daniel Köster, *Auswirkungen der preußischen Heeresreform auf die soziale Zusammensetzung des Offizierskorps: 1806–1848*, PhD Thesis (München: 1991), pp. 84, 106; Schwertfeger, ‘Neugestaltung’, p. 459.
- 57 The percentage of commoners in the officer corps had increased from 11 per cent in 1806 to 44 per cent in 1817. On reforms and the composition of the officer corps see Craig, *Politics*, p. 46; Jany, *Armee*, IV, p. 16; Köster, *Offizierskorps*, pp. 188, 287–90; Paret, *Yorck*, pp. 265–6.
- 58 On military schools see Blumen, *Jena*, p. 69; Clausewitz to General Diericke, 14 March 1810, Clausewitz, *Aufsätze*, p. 192; Hiller, *Denkwürdigkeiten*, p. 99; Rahden, *Wanderungen*, I, pp. 28–9, 40–2, 45–6, 79; Reiche, *Memoiren*, pp. 216–19; Memorandum, Scharnhorst, 1805, Klippel, *Scharnhorst*, III, pp. 237–55; Scharnhorst to Professor Stützer, 4 December

- 1809, Scharnhorst, *Briefe*, pp. 382–5; Memorandum, Scharnhorst, 1807, Vaupel, *Heer*, pp. 188–90. Also Louis A. von Scharfenort, *Die königlich-preußische Kriegsakademie* (Berlin: Mittler, 1910), pp. 5–19; Stübig, *Scharnhorst*, p. 86; Schwertfeger, ‘Neugestaltung’, p. 461. Shanahan wrongly maintains that the nobility had a large advantage in education. See Shanahan, *Reforms*, p. 132. The contrary was the case. Increasing emphasis on education favoured the middle classes over the nobility since middle-class sons had often received a considerably better education than many nobles. See Boyen, *Erinnerungen*, I, p. 244; Klöden, *Berlin*, pp. 35–6. Also Köster, *Offizierskorps*, p. 87.
- 59 For exercises see Blumen, *Jena*, p. 82; Boyen, *Erinnerungen*, I, pp. 266–7, 365–6; Henckel, *Erinnerungen*, p. 91. Also Reinhard Höhn, *Scharnhorsts Vermächtnis*, 2nd edition (Frankfurt: Bernhard and Graefe, 1972), p. 356; Paret, *Yorck*, p. 166; Schwertfeger, ‘Neugestaltung’, p. 469.
- 60 For the structure of general, corps and divisional staffs see Memorandum, Military Reorganization Commission, 1807/1808, Vaupel, *Heer*, pp. 205–7; Memorandum, Gneisenau, 1807, Vaupel, *Heer*, pp. 214–15; Memorandum, Scharnhorst, 1807, Vaupel, *Heer*, pp. 216–18.
- 61 On generals’ hostility towards general staff officers see Höhn, *Vermächtnis*, pp. 321–4.
- 62 For general staff officer training see Memorandum, Major Rauch, 1808, Großer Generalstab, ‘Reorganisation’, I, pp. 308–10, 316; Military Reorganization Commission to Frederick William, 25 September 1807, Vaupel, *Heer*, p. 100; Memorandum, Military Reorganization Commission, 1807/1808, Vaupel, *Heer*, pp. 208–9. Also Höhn, *Vermächtnis*, pp. 302, 348–51; Stübig, *Scharnhorst*, pp. 88–9.
- 63 For the general staff see Memorandum, Grolman, October 1814, E.von Conrady, *Leben und Wirken des Generals der Infanterie und kommandierenden Generals des V.Armeekorps Carl von Grolman* (Berlin: Mittler, 1894–1896), 3 vols, II, pp. 390–3. Also Höhn, *Vermächtnis*, pp. 308–12, 315; Kessel, *Grolman*, p. 124; Stübig, *Scharnhorst*, pp. 43–4; Wohlfeil, ‘Heer’, p. 168. Though Grolman’s Memorandum dates from 1814, the ideas, largely reflecting Scharnhorst’s, were certainly already discussed long before.
- 64 For a comparison between the Prussian and French general staff see Peter Paret, ‘Napoleon and the Revolution in War’, P.Paret (ed.), *Makers of Modern Strategy* (Oxford: Clarendon, 1991), pp. 123–43, 136; Weigley, *Battles*, pp. 459–60.
- 65 Though Scharnhorst was acquainted with most of the military literature of his day, it is hard to establish whether he had read Bourcet.
- 66 On the *Kriegsdepartement* see Blumen, *Jena*, p. 62; Boyen, *Erinnerungen*, I, pp. 260–2; Decree, 25 September 1808, Großer Generalstab, ‘Reorganisation’, I, pp. 333–48; Decree, 25 December 1808, Vaupel, *Heer*, pp. 834–43. Also Jany, *Armee*, IV, p. 18; Wohlfeil, ‘Heer’, p. 167.
- 67 On mobilization plans see Boyen, *Erinnerungen*, I, pp. 260–2; Military Reorganization Commission to Frederick William, October 1807, Großer Generalstab, ‘Reorganisation’, I, p. 68; Scharnhorst to Frederick William, 16 July 1810, Scharnhorst, ‘Denkschriften’, p. 85.
- 68 Though Boyen would become the first Prussian minister of war in 1814, Scharnhorst had been a minister of war in all but the name. See Jany, *Armee*, IV, p. 31; Shanahan, *Reforms*, p. 144; Wohlfeil, ‘Heer’, pp. 111–12.
- 69 Saying that Scharnhorst had developed operational instruments does not imply that he had operational art in mind. Scharnhorst had embarked on these reforms because he wished to improve the military effectiveness of the Prussian army, not because he wished to ‘invent’ operational art.
- 70 For contingency plans see Blücher to Frederick William, 9 October 1809, Blücher, *Briefe*, p. 110; Decree, 21 April 1813, Blumenthal, *Landsturm*, pp. 163–76; Decree, 17 July 1813, Blumenthal, *Landsturm*, pp. 179–82; Boyen, *Beiträge*, pp. 20–1, 29–35; Boyen, *Erinnerungen*, I, pp. 359–60; Carl Phillip Gottlieb von Clausewitz, H.Rothfels (ed.), *Carl von Clausewitz: Politische Schriften und Briefe* (München: Drei Masken, 1922), pp. 108–11;

- Memorandum, Scharnhorst, 31 July 1807, Großer Generalstab, 'Reorganisation', I, pp. 78–82; Reiche, *Erinnerungen*, p. 231; Memorandum, Scharnhorst, 28 January 1810, Scharnhorst, 'Denkschriften', pp. 66–9; Scharnhorst to Frederick William, 16 July 1810, Scharnhorst, 'Denkschriften', pp. 86–90; Scharnhorst to Schill, 1809, Scharnhorst, *Briefe*, p. 360; Notes, Stein, 14 August 1808, Stein, *Briefwechsel*, II, pp. 485–6; Scharnhorst to Stein, 8 August 1808, Stein, *Briefe*, II, pp. 806; Memorandum, Stein, 11 August 1808, Stein, *Briefe*, II, pp. 809–10; Stein to Frederick William, 14 August 1808, Stein, *Briefe*, II, p. 812; Memorandum, Gneisenau, August 1808, Vaupel, *Heer*, pp. 550–2; Memorandum, Scharnhorst, August 1808, Vaupel, *Heer*, pp. 555–7; Stein to Goetzen, 23 September 1808, Vaupel, *Heer*, p. 587; Memorandum, Gneisenau, September 1808, Vaupel, *Heer*, pp. 593–7.
- 71 For the role of the king in the reform process see Boyen, *Erinnerungen*, I, p. 229; Scharnhorst to Clausewitz, 27 November 1807, Scharnhorst, *Briefe*, p. 335; Scharnhorst to General Zeschau, 12 November 1810, Scharnhorst, *Briefe*, p. 409. Also David Nash, *The Prussian Army: 1808–1815* (London: Almark, 1972), p. 87; Schwertfeger, 'Neugestaltung', pp. 472–4; Shanahan, *Reforms*, p. 127; Wohlfeil, 'Heer', p. 103. Nash's view that Frederick William III was a military incompetent who had to be kept out of the reform process is clearly not justified. The importance of the king's ideas in the sphere of operational art has been overlooked even by sympathetic historians. Boyen was also unfair when he observed that Frederick William's military understanding was limited to the drill-square. Boyen, *Erinnerungen*, I, p. 207.
- 72 The only conservative item in this memorandum was his continued preference for the all-arms division rather than the army corps. His tactical proposal to await the enemy attack on the reverse slope of a hill and only advance to the crest when the enemy was very close, reminds of Wellington. See Memorandum, Frederick William, 18 November 1806, Großer Generalstab, 'Reorganisation', I, pp. 10–16.
- 73 See Antoine La Roche-Aymon, *Über den Dienst der leichten Truppen* (Königsberg: Degen, 1808), pp. 3–5, 15–21.
- 74 On military organization see Military Reorganization Commission to Frederick William, 25 September 1807, Großer Generalstab, 'Reorganisation', I, pp. 63–4; Decree, 16 November 1808, Großer Generalstab, 'Reorganisation', I, pp. 206–7; Decree, 20 November 1807, Vaupel, *Heer*, p. 160. Also Stübiger, *Scharnhorst*, p. 91.
- 75 For the regulations see Prussia, *Exerzier-Reglement für die Infanterie der königlich-preußischen Armee* (Berlin: Decker, 1812); Prussia, *Exerzier-Reglement für die Kavallerie der königlich-preußischen Armee* (Berlin: Decker, 1812); Prussia, *Exerzier-Reglement für die Artillerie der königlich-preußischen Armee* (Berlin: Decker, 1812).
- 76 Hohenlohe had proposed the training of the third rank as skirmishers as early as 1803. See Hahlweg, *Reformzeit*, p. 18.
- 77 The importance of a new form of motivation for open-order combat should not be overrated. The Prussian *Jäger* and fusiliers of 1792–1795 and 1806, which had not been motivated by nationalist sentiments or hope of a military career, had also fought very bravely.
- 78 The old regulations had been too closely oriented on linear tactics. For the text of Yorck's 'Instruction für sämtliche leichte Brigaden' see Hahlweg, *Reformzeit*, pp. 73–87.
- 79 La Roche-Aymon, *Truppen*, pp. 120–9.
- 80 Boyen, *Erinnerungen*, I, pp. 364–5; Prussia, *Infanterie 1812*, p. 69.
- 81 For the *Normalbattalion* see Blumen, *Jena*, pp. 71–3, 80; Boyen, *Erinnerungen*, II, p. 392. Also Schwertfeger, 'Neugestaltung', pp. 453, 469.
- 82 Scharnhorst, *Ausgewählte Schriften*, pp. 123–4, 146.
- 83 For comments on the regulations see Jany, *Armee*, IV, pp. 49–51; Paret, *Yorck*, p. 152; Martin Rink, *Vom 'Partheygänger' zum Partisanen: Die Konzeption des kleinen Krieges in Preußen, 1740–1813* (Frankfurt: Peter Lang, 1999), p. 265; Shanahan, *Reforms*, p. 184.
- 84 For the reform of the train see Military Reorganization Commission to Frederick William, October 1807, Großer Generalstab, 'Reorganisation', I, pp. 70–2; Memorandum, Military

Reorganization Commission, 1808, Großer Generalstab, 'Reorganisation', II, pp. 496–8. Also Jany, *Armee*, IV, pp. 34–5, 47; Kiesling, *Geschichte*, pp. 14, 20–7; Wohlfeil, 'Heer', p. 166.

## 5

## CAMPAIGNS OF 1813

- 1 For the domestic imperative see Fezensac, *Souvenirs*, pp. 355–6; Otto von Odeleben, *Napoleons Feldzug in Sachsen im Jahr 1813*, 2nd improved edition (Dresden: Arnold, 1816), p. 22; Louis Philippe de Ségur, L.de Ségur (ed.), *Un Aide de Camp de Napoleon: Mémoires du Général Comte de Ségur* (Paris: Firmin-Didot, 1895), 2 vols, II, pp. 44, 54, 82.
- 2 For the imperial imperative see Wilhelm von Baden, P.Röder von Diersburg (ed.), *Denkwürdigkeiten des Generals der Infanterie Markgrafen Wilhelm von Baden aus den Feldzügen von 1809 bis 1815* (Karlsruhe: Bielefeld, 1864), p. 111; King Frederick of Württemberg to General Franquemont, 16 April 1813, Rudolf Carl Fritz von Caemmerer and Albert Hermann Ludwig von Holleben, *Geschichte des Frühjahrsfeldzuges 1813 und seine Vorgeschichte* (Berlin: Mittler, 1904–1909), 2 vols, I, p. 424; Napoleon to Caulaincourt, 8 May 1813, *CN*, XXV, no. 19984. Also Caemmerer and Holleben, *Geschichte*, I, p. 235, II, p. 126.
- 3 For Napoleon's diplomacy see Napoleon to Francis I of Austria, 4 May 1813, *CN*, XXV, no. 19963; Napoleon to Caulaincourt, 17 May 1813, *CN*, XXV, no. 20017; Napoleon to Francis I of Austria, 17 May 1813, *CN*, XXV, no. 20018; John Fane Westmoreland, *Memoiren über die Operationen der verbündeten Heere unter dem Fürsten Schwarzenberg und dem Feldmarschall Blücher während des Endes 1813 und 1814*, trans. F.W.Schreiber (Berlin: Mittler, 1844), p. 2. Also Caemmerer and Holleben, *Geschichte*, II, pp. 2, 194–6, 269; Ross, *History*, p. 339; Owen Connelly, *Blundering to Glory: Napoleon's Military Campaigns* (Wilmington: Scholarly Resources, 1987), p. 189.
- 4 On the strategic deployment of French forces in 1813 see Caemmerer and Holleben, *Geschichte*, I, pp. 175, 198, II, pp. 410–16; Elting and Esposito, *Atlas*, pp. 126–7.
- 5 Müffling, *Leben*, p. 52.
- 6 For the king's prevarication see Boyen, *Erinnerungen*, I, pp. 301, 307, 309, II, pp. 529, 537–8; Memorandum, Frederick William, 28 December 1812, Caemmerer and Holleben, *Geschichte*, I, pp. 414–15; Marwitz, *Edelmann*, I, pp. 153, 169, 526, 540–3. Also Caemmerer and Holleben, *Geschichte*, II, pp. 81, 83, 85, 90–1.
- 7 For Frederick William's reaction to Yorck's decision see Boyen, *Erinnerungen*, II, p. 518; Henckel, *Erinnerungen*, p. 179; Reiche, *Memoiren*, p. 250; Scharnhorst to Yorck, 19 March 1813, Scharnhorst, *Briefe*, p. 461. Also Jany, *Armee*, IV, pp. 227–8, 243; Paret, *Yorck*, pp. 192–5. For the text of the Convention of Taugoggen see Georg Friederich von Martens (ed.), *Nouveau Recueil de Traités d'Alliance, de Paix, de Trêve, de Neutralité, de Commerce, de Limites, d'Échange etc. et de plusieurs autres Actes Servant à la Connaissance des Relations Étrangères des Pussiances et États de l'Europe* (Göttingen: Dieterich, 1817), 17 vols, I, pp. 556–7.
- 8 Boyen, *Erinnerungen*, II, pp. 532–4.
- 9 In 1811/12, Prussia had offered France an alliance while negotiating with Russia as well. See Boyen, *Erinnerungen*, I, pp. 372–8.
- 10 For the diverging war aims see Boyen, *Erinnerungen*, II, pp. 547, 558. Also Caemmerer and Holleben, *Geschichte*, II, pp. 141, 362; Georg Cardinal von Widdern, *Die Streifkorps im deutschen Befreiungskriege 1813* (Berlin: Eisenschmidt, 1894), pp. 2, 14; Elting and Esposito, *Atlas*, pp. 126–7; Ross, *History*, pp. 327–33; Schroeder, *Transformation*, pp. 454, 464–5.

- 11 For the relation between Prussian mobilization and alliance politics see Hiller, *Denkwürdigkeiten*, p. 152. Also Caemmerer and Holleben, *Geschichte*, I, p. 86; Wohlfeil, 'Heer', p. 129.
- 12 On Prusso-Russian differences in strategy see Blücher to Hardenberg, 30 March 1813, Blücher, *Briefe*, pp. 156–7; Boyen, *Erinnerungen*, II, pp. 556–8; Kutusov to Wintzingerode, March 1813, Caemmerer and Holleben, *Geschichte*, I, p. 448; Memorandum, Scharnhorst, 25 April 1813, Caemmerer and Holleben, *Geschichte*, II, p. 359; Blücher to Barclay, 1 June 1813, Conrady, *Grolman*, II, pp. 375–6; Langeron, *Mémoires*, p. 167.
- 13 For the strategy behind Lützen and Bautzen see Boyen, *Erinnerungen*, II, pp. 567, 576; Carl Phillip Gottlieb von Clausewitz, A. von Schlieffen (ed.), *Der Feldzug 1812 in Rußland und die Befreiungskriege von 1813–1815*, 3rd improved edition (Berlin: Dümmler, 1906), pp. 202, 212; Scharnhorst to Captain Röder, 14 April 1813, Caemmerer and Holleben, *Geschichte*, I, p. 453; Scharnhorst, Plan, 23 April 1813, Caemmerer and Holleben, *Geschichte*, I, pp. 460–3; Langeron, *Mémoires*, p. 178; Reiche, *Memoiren*, p. 277. Also Caemmerer and Holleben, *Geschichte*, I, p. 178.
- 14 On the Russo-Prussian scorched earth policy see Ney to Reynier, 15 May 1813, Paul Jean Foucart (ed.), *Bautzen: Une Bataille de deux Jours* (Paris: Berger-Levrault, 1897), p. 212; Napoleon to Berthier, 13 May 1813, *CN*, XXV, no. 20005; Napoleon to Ney, 14 May 1813, *CN*, XXV, no. 20007; Napoleon to Ney, 14 May 1813, *CN*, XXV, no. 20009; Reiche, *Memoiren*, p. 285.
- 15 On Prussian strategic deployment see Müffling to Gneisenau, 9 August 1813, Gneisenau, *Nachlaß*, Geheimes Staatsarchiv Preußischer Kulturbesitz, VI.HA.N1, box 23, sheets 17–26. Also Caemmerer and Holleben, *Geschichte*, I, pp. 437–9; II, p. 138.
- 16 On the resistance against conscription see Elting and Esposito, *Atlas*, pp. 126–7; Forrest, *Conscripts*; Jean Morvan, *Le Soldat Impérial: 1800–1814* (Paris: Plon, 1904), pp. 99–101; Ottomar von der Osten-Sacken, *Die französische Armee im Jahre 1813* (Berlin: Wilhelmi, 1889), pp. 16, 20.
- 17 Napoleon to Clarke, 27 September 1813, *CN*, XXVI, no. 20645.
- 18 For French manpower mobilization see Napoleon to Cambacérés, 15 August 1813, *CN*, XXVI, no. 20379; Napoleon to Clarke, 18 August 1813, Napoleon, *CN*, XXVI, no. 20410; Napoleon to Clarke, 27 September 1813, *CN*, XXVI, no. 20645; Odeleben, *Feldzug*, p. 19. Also Caemmerer and Holleben, *Geschichte*, I, pp. 172–4; Connelly, *Blundering*, p. 184; Elting and Esposito, *Atlas*, pp. 126–7; Morvan, *Soldat*, pp. 97–8; Osten-Sacken, *Armee*, pp. 12–20, 157; Camille Rousset, *La Grande Armée de 1813* (Paris: Didier, 1871), pp. 301–4.
- 19 Osten-Sacken, *Armee*, p. 21.
- 20 For the Confederation's mobilization effort see Baden, *Denkwürdigkeiten*, p. 103; Napoleon to Maret, 4 April 1813, *CN*, XXVI, no. 19800; Napoleon to Frederick of Württemberg, 8 April 1813, *CN*, XXVI, no. 19830; Napoleon to Frederick-August of Saxony, 8 April 1813, *CN*, XXVI, no. 19831; Napoleon to Frederick-August of Saxony, 20 April 1813, *CN*, XXVI, no. 19886. Also Connelly, *Blundering*, p. 184.
- 21 For the impact of raiders on mobilization see Marwitz, *Edelmann*, p. 562. Also Caemmerer and Holleben, *Geschichte*, I, p. 148; Cardinal, *Streifcorps*, pp. 193–5; Fritz von Jagwitz, *Geschichte des Lützowschen Freikorps* (Berlin: Mittler, 1892), pp. 51, 60–1.
- 22 For the French officer corps in 1813 see Fezensac, *Souvenirs*, p. 365; Marmont, *Mémoires*, V, p. 7; Napoleon to Berthier, 11 January 1813, *CN*, XXIV, no. 19439; Napoleon to Clarke, 2 April 1813, *CN*, XXV, no. 19795; Napoleon to General Bertrand, 4 April 1813, *CN*, XXV, no. 19804; Napoleon to Marmont, 17 April 1813, *CN*, XXV, no. 19868; Napoleon to Clarke, 27 April 1813, *CN*, XXV, no. 19915; Napoleon to Clarke, 5 May 1813, *CN*, XXV, no. 19969; Benedikt Peter, Wilhelm Kohlhaas (ed.), *Wachmeister Peter mit und gegen Napoleon* (Stuttgart: Steinkopf, 1980), p. 90. Also Osten-Sacken, *Armee*, p. 28.
- 23 For the morale of the French army and its allies in 1813 see Baden, *Denkwürdigkeiten*, pp. 111–12, 132; Barrès, *Memoirs*, p. 164; Elzéar Blaze, A.V. de Vigay (ed.), *Military Life in*

- Bivouac, Camp, Garrison, etc.* (London: Colburn, 1840), pp. 3–4, 17, 209; Borcke, *Kriegerleben*, pp. 249–52, 273–4; Fezensac, *Souvenirs*, p. 453; Oudinot to Berthier, 22 May 1813, Foucart, *Bautzen*, p. 319; Odeleben, *Feldzug*, pp. 10, 48, 178, 322; Peter, *Wachtmeister*, pp. 91, 213, 216, 238; Vandamme to Berthier, 22 May 1813, Dominique Joseph René Vandamme, P.E.A. du Casse (ed.), *Le Général Vandamme et sa Correspondance* (Paris: Didier, 1870), 2 vols, II, p. 455.
- 24 Caemmerer and Holleben, *Geschichte*, II, p. 158. On desertion, shirking, and self-mutilation see Baden, *Denkwürdigkeiten*, p. 105; Barrès, *Memoirs*, pp. 170–2; G.Fabry, *Journal des Opérations des IIIe et Ve Corps en 1813* (Paris: Chapelot, 1902), pp. 200–1; Berthier to Marmont, 13 June 1813, Marmont, *Mémoires*, V, pp. 176–7. Also Caemmerer and Holleben, *Geschichte*, II, p. 158.
- 25 For Prussian manpower mobilization see Blumen, *Jena*, p. 157; Boyen, *Erinnerungen*, I, p. 153, II, p. 609; Frederick William to General Bülow, 20 December 1812, Caemmerer and Holleben, *Geschichte*, I, pp. 409–11; Decree, 20 December 1812, Caemmerer and Holleben, *Geschichte*, I, p. 412; Clausewitz, *Befreiungskriege*, p. 194; Langeron, *Mémoires*, p. 200; Westmoreland, *Memoires*, p. 187. Also Caemmerer and Holleben, *Geschichte*, I, pp. 104, 210–11; Jany, *Armee*, IV, pp. 90, 94, 98–100; Carl von Plotho, *Der Krieg in Deutschland und Frankreich in den Jahren 1813 und 1814* (Berlin: Amelang, 1817), 3 vols, I, Annex, no. 2; Dorothea Schmidt, *Die preussische Landwehr 1813* (Berlin: Militärverlag, 1987), pp. 20–1. For voluntary enlistment see Anon., *Reiterleben*, II, p. 188; Blumen, *Jena*, p. 157; Klöden, *Berlin*, p. 358; Wenzel Krimer, A.Saager (ed.), *Erinnerungen eines alten Lützower Jägers: 1795–1819*, 2nd edition (Stuttgart: Lutz, 1913), 2 vols, I, p. 271; Rahden, *Wanderungen*, I, pp. 53–5; Reiche, *Memoiren*, pp. 241, 243; Scharnhorst to his daughter, 2 February 1813, Scharnhorst, *Briefe*, p. 453; Scharnhorst to his daughter, 19 March 1813, Scharnhorst, *Briefe*, p. 462; Henrik Steffens, *Was ich erlebte: Erinnerungen aus den Jahren 1806 und 1813* (Leipzig: Wigand, no date), p. 164. Also Elting and Esposito, *Atlas*, pp. 126–7. For the strength of allied armies in August 1813 see Langeron, *Mémoires*, pp. 202–4, 206; Westmoreland, *Memoires*, p. 210. Also August Grouard, *Stratégie Napoléonienne: La Campagne d'Automne de 1813 et les Lignes Intérieurs* (Paris: Baudoin, 1897), p. 21; Schmidt, *Landwehr*, p. 28.
- 26 For the impact of Frederick William's hesitation on mobilization see Anon., *Reiterleben*, II, p. 178; Boyen, *Erinnerungen*, II, pp. 531, 575.
- 27 For the chaotic conditions of mobilization see Boyen, *Erinnerungen*, II, p. 535; Blücher to General Hake, 11 March 1813, Blücher, *Briefe*, p. 155.
- 28 For Prussian administrative arrangements see Boyen, *Erinnerungen*, II, pp. 544–6; Russo-Prussian Convention, 19 March 1813, Caemmerer and Holleben, *Geschichte*, I, pp. 421–2. Also Caemmerer and Holleben, *Geschichte*, I, pp. 109, 318.
- 29 For arms production see Anon., *Reiterleben*, II, pp. 187, 200; Blumen, *Jena*, p. 144; Boyen, *Erinnerungen*, II, p. 535; Hiller, *Denkwürdigkeiten*, p. 158; Reiche, *Memoiren*, p. 243. Also Caemmerer and Holleben, *Geschichte*, I, pp. 65–6, 103, 111–12.
- 30 For the impact of the Russian campaign on Prussian experience see Hiller, *Denkwürdigkeiten*, p. 121.
- 31 For the Prussian officer corps in 1813 see Boyen, *Erinnerungen*, II, pp. 532, 606, 608; Frederick William to General Bülow, 20 December 1812, Caemmerer and Holleben, *Geschichte*, I, p. 411; Henckel, *Erinnerungen*, p. 215; Hiller, *Denkwürdigkeiten*, p. 158; Heinrich von Jordan, L. von Jordan (ed.), *Erinnerungsblätter und Briefe eines jungen Freiheitskämpfers aus den Jahren 1813 und 1814* (Berlin: Siegismund, 1914), p. 25; Westmoreland, *Memoires*, p. 19. Also Caemmerer and Holleben, *Geschichte*, I, pp. 76, 105; Karl Demeter, *Das Deutsche Offizierskorps in Gesellschaft und Staat: 1650–1945* (Frankfurt: Bernard und Graefe, 1962), p. 7; Jany, *Armee*, IV, pp. 17, 79; Schmidt, *Landwehr*, p. 25. For frictions between professionals and 'amateurs' see Boyen,

- Erinnerungen*, II, pp. 577, 595; Rahden, *Wanderungen*, I, pp. 118, 140. Also Schmidt, *Landwehr*, p. 26.
- 32 For Prussian patriotism in 1813 see Heinrich Bolte, H.Lem von Zieten (ed.), *Tagebuch von Heinrich Bolte, Adjutant Blüchers 1813–14* (Berlin: no publisher, no date), pp. 3, 26, 29; Boyen, *Erinnerungen*, II, pp. 517, 529, 535, 578–9, 582–3; Meno Burg, *Geschichte meines Dienstlebens* (Berlin: Behr, 1854), pp. 11–12; Lieutenant Herwig to his fiancée, 16 April 1813, Herwig, *Erinnerungen*, p. 35; Hiller, *Denkwürdigkeiten*, p. 147; Jordan, *Briefe*, pp. 14, 24, 28, 31, 34; Klöden, *Berlin*, p. 352; Marmont, *Mémoires*, V, p. 125; Marwitz, *Edelmann*, I, pp. 551–2; Reiche, *Memoiren*, p. 243; Steffens, *Erinnerungen*, pp. 136, 154–8.
- 33 Elting and Esposito, *Atlas*, pp. 126–7; Gates, *Wars*, pp. 227–30. The relatively small number of volunteer *Jäger* is not necessarily an indication for want of patriotism since Prussia was so impoverished that probably only a small number of Prussians could afford to equip themselves.
- 34 For voluntary contributions see Anon., *Reiterleben*, II, pp. 177, 181–2, 184, 187–9; Boyen, *Erinnerungen*, II, pp. 536–7, 593; Hiller, *Denkwürdigkeiten*, p. 143; Klöden, *Berlin*, p. 364; Waldemar von Löwenstein, F.von Smitt (ed.), *Denkwürdigkeiten eines Livländers aus den Jahren 1790–1815* (Leipzig: Winter, 1858), 2 vols, II, p. 4; Rahden, *Wanderungen*, I, pp. 70–1, 115; Reiche, *Memoiren*, pp. 242, 303–1; Steffens, *Erinnerungen*, pp. 169–70. Also Caemmerer and Holleben, *Geschichte*, II, pp. 132, 170; Jany, *Armee*, IV, pp. 84–5.
- 35 For the resistance against the Landsturm see Chapter 4 and Boyen, *Erinnerungen*, II, pp. 577, 595–9; Henckel, *Erinnerungen*, pp. 203–4. For instances of civilian armed resistance see Boyen, *Erinnerungen*, II, p. 594. Also Caemmerer and Holleben, *Geschichte*, I, p. 167.
- 36 For insurrections outside Prussia and allied encouragement see Blücher to Bonin, 4 November 1813, Blücher, *Briefe*, p. 192; Boyen, *Erinnerungen*, II, p. 668; Fezensac, *Souvenirs*, pp. 362–3; Friedrich Carl Ferdinand von Müffling, *Betrachtungen über die großen Operationen und Schlachten der Feldzüge von 1813 und 1814* (Berlin: Mittler, 1825), p. 9; Müffling, *Leben*, p. 31; Order, Blücher, 23 March 1813, Odeleben, *Feldzug*, p. 212; Vandamme to Berthier, 4 April 1813, Vandamme, *Correspondance*, II, p. 393; Vandamme to Berthier, 6 April 1813, Vandamme, *Correspondance*, II, p. 396; Vandamme to Berthier, 19 April 1813, Vandamme, *Correspondance*, II, p. 412; Willems, *Odyssee*, pp. 141–3. Also Caemmerer and Holleben, *Geschichte*, I, pp. 268, 272–3; Cardinal, *Streifcorps*, pp. 8–9, 20–3.
- 37 For the shift of morale in the *Landwehr* see Blumen, *Jena*, pp. 152, 154. Also Caemmerer and Holleben, *Geschichte*, I, p. 75, II, pp. 397, 401; Schmidt, *Landwehr*, p. 21.
- 38 For the morale in Prussia's armed forces in 1813 see Anon., *Reiterleben*, II, pp. 204, 206–7, 212, 228; Blücher to Boyen, April 1813, Blücher, *Briefe*, p. 163; Blücher to Bonin, 27 August 1813, Blücher, *Briefe*, p. 176; Blücher to Bonin, 22 September 1813, Blücher, *Briefe*, p. 183; Boyen, *Erinnerungen*, I, p. 357, II, pp. 532, 606, 543, 568, 571–2, 574, 576, 592–4, 652, 686; Lieutenant Eberhardt to his mother, 16 June 1813, Eberhardt, *Briefe*, p. 137; Gneisenau to his wife, 13 May 1813, Gneisenau, *Briefe*, p. 70; Lieutenant Herwig to his fiancée, 16 April 1813, Herwig, *Erinnerungen*, p. 36; Hiller, *Denkwürdigkeiten*, p. 158; Krimer, *Erinnerungen*, I, pp. 22, 28, 56, 61, 65, 283–4, 339–40; Langeron, *Mémoires*, p. 312; Marwitz, *Edelmann*, I, p. 561; Müffling, *Leben*, p. 80; Rahden, *Wanderungen*, I, pp. 161, 201; Reiche, *Memoiren*, pp. 271, 285, 301, 305, 316; Scharnhorst to Professor Goeschon, 3 May 1813, Scharnhorst, *Briefe*, p. 475; Wedel, *Lebenserinnerungen*, I, p. 53; Westmoreland, *Memoiren*, p. 19. Also Wohlfeil, 'Heer', p. 151.
- 39 The composition of French corps in autumn 1813 was similar to that of 1806. Corps consisted of several divisions, each division of two brigades of six to eight battalions and two batteries, furthermore a corps artillery reserve, a light cavalry brigade, and a train detachment. See Rousset, *Armée*, p. 316.
- 40 Elting and Esposito, *Atlas*, p. 134.

- 41 For the weakness of French recruits see Fezensac, *Souvenirs*, p. 444; Lauriston to Berthier, 8 May 1813, Foucart, *Bautzen*, p. 100; Marmont, *Mémoires*, V, p. 9; Napoleon to Clarke, 25 October 1813, *CN*, XXVI, no. 20835; J.N.A.Noel, L. Noel (ed.), *Souvenirs Militaires d'un Officier du Premier Empire: 1795–1832* (Paris: Berger-Levrault, 1895), p. 225. Also Elting and Esposito, *Atlas*, p. 139; Osten-Sacken, *Armee*, pp. 33, 69, 79, 162, 164, 166. For poor marching discipline see Odeleben, *Feldzug*, pp. 14, 186. For the comparative number of guns see Odeleben, *Feldzug*, p. 16. Also Hugo Friedrich Philip Johann von Freytag-Loringhoven, *Aufklärung und Armeeführung dargestellt an den Ereignissen bei der Schlesischen Armee im Herbst 1813* (Berlin: Mittler, 1900), pp. 134–53. At Jena, Napoleon had 0.9 guns per 1,000 men, at Leipzig 2.5 guns per 1,000 men. See Elting and Esposito, *Atlas*, p. 66; Osten-Sacken, *Armee*, p. 172.
- 42 In autumn 1813, Prussian corps consisted of four brigades, each comprising eight regular, reserve, and *Landwehr* battalions, one cavalry regiment, and one battery, furthermore 16–20 squadrons in the corps cavalry reserve and three batteries of foot as well as three batteries of horse artillery in the corps artillery reserve. Prussian corps organization changed considerably in the course of 1813 and differed from corps to corps. For Prussian corps organization see Boyen, *Erinnerungen*, II, p. 611. Also Conrady, *Grolman*, II, pp. 377–8; Caemmerer and Holleben, *Geschichte*, I, pp. 397–401; Freytag-Loringhoven, *Aufklärung*, pp. 134–7.
- 43 Vandamme to Berthier, 4 April 1813, Vandamme, *Correspondance*, II, p. 394. On the French staff system in 1813 see Rousset, *Armée*, pp. 313–15.
- 44 For the impact of staff officer shortage on operations see Baden, *Denkwürdigkeiten*, p. 115; Marmont to Berthier, 15 April 1813, Marmont, *Mémoires*, V, p. 59; Napoleon to Marmont, 17 April 1813, *CN*, XXV, no. 19867; Napoleon to Marmont, 1 May 1813, *CN*, XXV, no. 19934. Also Osten-Sacken, *Armee*, pp. 85, 128–9.
- 45 For the limited competence of marshals in independent command see Fezensac, *Souvenirs*, pp. 419, 427; Marbot, *Memoirs*, p. 380; Marmont, *Mémoires*, V, pp. 237, 246; Odeleben, *Feldzug*, pp. 284–5. Also Osten-Sacken, *Armee*, pp. 72, 136, 144.
- 46 For insubordination among marshals see Fezensac, *Souvenirs*, pp. 442–3; Marbot, *Memoirs*, p. 573; Marmont, *Mémoires*, V, p. 138. Also Osten-Sacken, *Armee*, pp. 136–7, 149.
- 47 For treason see Fezensac, *Souvenirs*, pp. 428, 431. Also Osten-Sacken, *Armee*, p. 146.
- 48 For the degree of secondary army commanders' discretion and the sharing of information see Berthier to Ney, 17 May 1813, Foucart, *Bautzen*, p. 232; Ney to Berthier, 18 May 1813, Foucart, *Bautzen*, p. 267; Napoleon to Berthier, 23 August 1813, *CN*, XXVI, no. 20442. For examples of Napoleon sharing intelligence and plans see Napoleon to Bertrand, 12 April 1813, *CN*, XXV, no. 19852; Napoleon to Ney, 30 April 1813, *CN*, XXV, no. 19929; Napoleon to Ney, 16 August 1813, *CN*, XXVI, no. 20389; Napoleon to Macdonald, 16 August 1813, *CN*, XXVI, no. 20390; Napoleon to Berthier, 2 October 1813, *CN*, XXVI, no. 20677.
- 49 For the impact of raiders on military correspondence see Eugène to Berthier, 3 May 1813, Foucart, *Bautzen*, p. 12; Bertrand to Berthier, 15 May 1813, Foucart, *Bautzen*, p. 206; Langeron, *Mémoires*, p. 294; Löwenstein, *Denkwürdigkeiten*, II, pp. 13, 33–4, 50–1, 54–5, 82–5. Also Caemmerer and Holleben, *Geschichte*, II, p. 153.
- 50 For examples of inter-corps cooperation see Marmont to Berthier, 15 May 1813, Foucart, *Bautzen*, p. 199; Marmont to Ney, 13 April 1813, Marmont, *Mémoires*, V, p. 55; Berthier to Marmont, 1 September 1813, Marmont, *Mémoires*, V, pp. 226–7; Napoleon to Berthier, 29 August 1813, *CN*, XXVI, no. 20485.
- 51 On the Prussian staff organization see Anon, 'Einteilung des Generalstabes beim Corps des Generals von der Kavallerie Blücher', Spring 1813, Gneisenau, *Nachlaß*, box 39, sheet 41. Also Caemmerer and Holleben, *Geschichte*, I, p. 434; Conrady, *Grolman*, II, p. 377.
- 52 Frederick William, Decree, 2 April 1813, Caemmerer and Holleben, *Geschichte*, I, pp. 449–52; Wedel, *Lebenserinnerungen*, I, pp. 50, 61, 84. On Prussian staff routines and procedures



- see Caemmerer and Holleben, *Geschichte*, I, p. 357; Freytag-Loringhoven, *Aufklärung*, p. 61.
- 53 For the relations between Blücher and his chiefs of staff see Anon., *Reiterleben*, II, p. 198; Blücher to Knesebeck, 1 October 1813, Blücher, *Briefe*, p. 184; Boyen, *Erinnerungen*, II, p. 551; Langeron, *Mémoires*, pp. 208–9; Marwitz, *Edelmann*, I, p. 419; Scharnhorst to his daughter, 2 May 1813, Scharnhorst, *Briefe*, p. 473. Also Görlitz, *Generalstab*, pp. 57, 61.
- 54 For the relations between commanders and chiefs of staff see Boyen, *Erinnerungen*, II, pp. 614, 621, 643; Reiche, *Memoiren*, p. 255; Wedel, *Lebenserinnerungen*, I, p. 90.
- 55 For Gneisenau's unprofessional conduct see Müffling, *Leben*, pp. 87, 88; Wedel, *Lebenserinnerungen*, I, pp. 54, 76. Also Freytag-Loringhoven, *Aufklärung*, pp. 15, 21, 44, 46, 58.
- 56 For the inappropriate use of general staff officers see Boyen, *Erinnerungen*, II, pp. 638–9.
- 57 For the relations between Bülow and Borstell see Boyen, *Erinnerungen*, II, pp. 650–1; Reiche, *Memoiren*, pp. 308–17. Also Caemmerer and Holleben, *Geschichte*, I, p. 282.
- 58 For the Russian chain of command see Reiche, *Memoiren*, p. 270. Also Caemmerer and Holleben, *Geschichte*, II, pp. 24, 38, 93–4; Elting and Esposito, *Atlas*, p. 128.
- 59 For the monarchs' interference see Boyen, *Erinnerungen*, II, p. 570; Reiche, *Memoiren*, pp. 269, 272; Scharnhorst to his daughter, 2 May 1813, Scharnhorst, *Briefe*, p. 473; Wedel, *Lebenserinnerungen*, I, pp. 57, 69. Also Caemmerer and Holleben, *Geschichte*, II, pp. 70, 213, 221; Elting and Esposito, *Atlas*, p. 133.
- 60 Freytag-Loringhoven, *Aufklärung*, p. 113.
- 61 For Bülow's and Borstells insubordination see Boyen, *Erinnerungen*, II, pp. 643, 650–1. Also Görlitz, *Generalstab*, p. 61.
- 62 For allied staff blunders see Boyen, *Erinnerungen*, II, p. 568; Henckel, *Erinnerungen*, p. 181; Rahden, *Wanderungen*, I, p. 65; Order, Wittgenstein, 27 April 1813, Caemmerer and Holleben, *Geschichte*, II, pp. 29–31.
- 63 For French weaknesses in security and reconnaissance see Boyen, *Erinnerungen*, II, pp. 638–9, 653; Report, Lauriston, 6 May 1813, Foucart, *Bautzen*, p. 73; Berthier to Macdonald, 13 May 1813, Foucart, *Bautzen*, p. 153; Report, Marmont, 13 May 1813, Foucart, *Bautzen*, p. 166; Langeron, *Mémoires*, p. 173; Lejeune, *Aide-de-Camp*, II, pp. 284–5; Marmont to Berthier, 15 April 1813, Müffling, *Betrachtungen*, pp. 59, 63; Napoleon to Bertrand, 12 April 1813, *CN*, XXV, no. 19851; Napoleon to Ney, 20 April 1813, *CN*, XXV, no. 19889; Napoleon to Ney, 27 April 1813, *CN*, XXV, no. 19912; Napoleon to Murat, 12 October 1813, *CN*, XXVI, no. 20777; Napoleon to Macdonald, 14 October 1813, *CN*, XXVI, no. 20801; Odeleben, *Feldzug*, pp. 176–7, 327. Also Elting and Esposito, *Atlas*, p. 129; Gates, *Wars*, p. 177; Grouard, *Stratégie*, p. 126; Osten-Sacken, *Armee*, pp. 140, 145.
- 64 For Prussian and allied reconnaissance and military intelligence see Königlich Preußisches Nachrichten Bureau, 'Stärkenachweisungen der Franzosen', Gneisenau, *Nachlaß*, box 39, sheet 109; Blücher to his wife, 12 April 1813, Blücher, *Briefe*, p. 160; Blücher to Boyen, April 1813, Blücher, *Briefe*, p. 163; Boyen, *Erinnerungen*, II, pp. 584, 621–2, 638–9, 679; Plan, Scharnhorst, 30 April 1813, Caemmerer and Holleben, *Geschichte*, II, p. 33; Clausewitz, *Befreiungskriege*, p. 201; Hiller, *Denkwürdigkeiten*, pp. 193–4; Langeron, *Mémoires*, p. 169; Müffling, *Betrachtungen*, p. 30; Rahden, *Wanderungen*, I, pp. 150–1; Wedel, *Lebenserinnerungen*, I, p. 92. Also Caemmerer and Holleben, *Geschichte*, I, p. 310, II, pp. 27–8, 186; Freytag-Loringhoven, *Aufklärung*, pp. 9, 11, 43.
- 65 Prussia, *Kavallerie 1812*, p. 210.
- 66 For allied reconnaissance failures see Lieutenant Herwig to his fiancée, 2 October 1813, Herwig, *Erinnerungen*, p. 65; Reiche, *Memoiren*, pp. 303, 307, 331, 333; Wedel, *Lebenserinnerungen*, I, p. 92. Also Caemmerer and Holleben, *Geschichte*, I, p. 402, II, pp. 26, 38, 51; Elting and Esposito, *Atlas*, pp. 130–1, 137.
- 67 Fezensac, *Souvenirs*, p. 454.

- 68 For the exhaustion of rural resources see Baden, *Denkwürdigkeiten*, p. 109; Oudinot to Berthier, 8 May 1813, Foucart, *Bautzen*, p. 99; Odeleben, *Feldzug*, pp. 37, 41, 298–9, 327.
- 69 For the role of towns for supply see Dumas, *Souvenirs*, II, p. 502; Ney to Reynier, 5 May 1813, Foucart, *Bautzen*, p. 56; Dumas to Berthier, 9 May 1813, Foucart, *Bautzen*, pp. 113–14; Berthier to Daru, 9 May 1813, Foucart, *Bautzen*, p. 115; Marmont to Berthier, 19 April 1813, Marmont, *Mémoires*, V, Annex, p. 70; Napoleon to Bertrand, 8 April 1813, *CN*, XXV, no. 19828; Napoleon to Ney, 20 April 1813, *CN*, XXV, no. 19889; Napoleon to Duroc, 25 April 1813, *CN*, XXV, no. 19903; Napoleon to Berthier, 27 August 1813, *CN*, XXVI, no. 20481; Napoleon to Daru, 12 September 1813, *CN*, XXVI, no. 20551; Napoleon to Daru, 13 September 1813, *CN*, XXVI, no. 20559; Napoleon to Berthier, 29 September 1813, *CN*, XXVI, no. 20659; Napoleon to Maret, 13 October 1813, *CN*, XXVI, no. 20796. Also Pernot, *Transport*, p. 223. For rear supply from the centres of operations see Napoleon to Ney, 6 May 1813, Foucart, *Bautzen*, p. 61; Dumas to Berthier, 9 May 1813, Foucart, *Bautzen*, p. 111; Berthier to Dumas, 14 May 1813, Foucart, *Bautzen*, p. 181; Berthier to General Durosnel, 18 May 1813, Foucart, *Bautzen*, p. 255; General Durosnel to Berthier, 19 May 1813, Foucart, *Bautzen*, p. 283; General Durosnel to Berthier, 20 May 1813, Foucart, *Bautzen*, p. 284; Napoleon to General Duroc, 23 April 1813, *CN*, XXV, no. 19897; Napoleon to Duroc, 25 April 1813, *CN*, XXV, no. 19903; Napoleon to Ney, 26 April 1813, *CN*, XXV, no. 19906; Napoleon to Berthier, 30 May 1813, *CN*, XXV, no. 20054; Napoleon to Daru, 23 September 1813, *CN*, XXVI, no. 20619; Napoleon to Daru, 6 October 1813, *CN*, XXVI, no. 20710. For the corps supply reserves see Berthier to Bertrand, 8 May 1813, Foucart, *Bautzen*, p. 96; Order, Jomini, 11 May 1813, Foucart, *Bautzen*, p. 135; Napoleon to Maraiont, 7 April 1813, Marmont, *Mémoires*, V, Annex, p. 49; Napoleon to Eugène, 11 April 1813, *CN*, XXV, no. 19843; Napoleon to Bertrand, 19 April 1813, *CN*, XXV, no. 19877; Napoleon to Berthier, 25 August 1813, *CN*, XXVI, no. 20462; Napoleon to Mouton, 3 September 1813, *CN*, XXVI, no. 20518; Napoleon to Mortier, 10 September 1813, *CN*, XXVI, no. 20538. Also Osten-Sacken, *Armee*, p. 64.
- 70 For the French supply train see Dumas, *Souvenirs*, II, p. 495; General Durosnel to Berthier, 19 May 1813, Foucart, *Bautzen*, p. 283; Napoleon to Ney, 13 March 1813, *CN*, XXV, no. 19714; Napoleon to Duroc, 23 April 1813, *CN*, XXV, no. 19897; Napoleon to Caulaincourt, 7 May 1813, *CN*, XXV, no. 19981; Odeleben, *Feldzug*, p. 13; Napoleon to General Lacuée, 16 January 1813, Thouvenin, *Train*, p. 53; Napoleon to General Lacuée, 25 January 1813, Thouvenin, *Train*, pp. 54–5; Napoleon to General Lacuée, 23 July 1813, Thouvenin, *Train*, p. 60. Also Pernot, *Transpans*, pp. 221–2, 226.
- 71 For starvation in the *Grande Armée* see Pierre Berthezène, E.F. Berthezène (ed.), *Souvenirs Militaires de la République et de l'Empire* (Paris: Librairie Militaire, 1855), 2 vols, II, pp. 261–2; Bolte, *Tagebuch*, p. 71; Boyen, *Erinnerungen*, II, pp. 686–7; Fezensac, *Souvenirs*, p. 452; Lauriston to Eugène, 3 May 1813, Foucart, *Bautzen*, p. 17; Napoleon to Berthier, 5 May 1813, Foucart, *Bautzen*, p. 39; Henckel, *Erinnerungen*, p. 238; Napoleon to Daru, 23 September 1813, *CN*, XXVI, no. 20619; Noel, *Souvenirs*, p. 221; Marie Charlotte Julienne Eugénie Oudinot, G. Stiegler (ed.), *Memoirs of Marshal Oudinot*, trans. A. Teixeira de Mattos (London: Henry, 1896), p. 235. Also Caemmerer and Holleben, *Geschichte*, II, pp. 156–8; Osten-Sacken, *Armee*, p. 158; Rousset, *Armée*, pp. 247–3.
- 72 For the vulnerability of French supply lines see Baden, *Denkwürdigkeiten*, p. 104; Berthezène, *Souvenirs*, II, pp. 261, 287; Blücher to his wife, 15 May 1813, Blücher, *Briefe*, p. 166; Dupuy, *Souvenirs*, p. 241; Napoleon to Berthier, 5 May 1813, Foucart, *Bautzen*, p. 41; Berthier to General Durosnel, 18 May 1813, Foucart, *Bautzen*, p. 255; Hiller, *Denkwürdigkeiten*, p. 169; Krimer, *Erinnerungen*, I, p. 276; Macdonald, *Recollections*, II, p. 64; Napoleon to General Rogniat, 24 May 1813, *CN*, XXV, no. 20041; Napoleon to Berthier, 30 May 1813, *CN*, XXV, no. 20055; Napoleon to Gouvion Saint Cyr, 17 August 1813, *CN*, XXVI, no. 20398; Napoleon to Berthier, 18 August 1813, *CN*, XXVI, no. 20403; Napoleon to Berthier, 24 August 1813, *CN*, XXVI, no. 20453; Napoleon to Berthier, 25 September

- 1813, *CN*, XXVI, no. 20629; Odeleben, *Feldzug*, pp. 289–90; Peter, *Wachtmeister*, p. 90; Wedel, *Lebenserinnerungen*, I, pp. 95–6.
- 73 For Prussian supply and transport see Blumen, *Jena*, p. 154; Bolte, *Tagebuch*, pp. 6–11, 13, 17, 18, 22, 24, 32, 39; Boyen, *Erinnerungen*, II, p. 588; Jordan, *Briefe*, p. 54; Krimer, *Erinnerungen*, I, p. 27; Rahden, *Wanderungen*, I, p. 201. Also Grouard, *Stratégie*, p. 126; Jany, *Armee*, IV, pp. 34, 89; Kiesling, *Geschichte*, pp. 33, 36.
- 74 Blücher to Knesebeck, 13 September 1813, Blücher, *Briefe*, p. 179.
- 75 For Prussian baggage see Anon., *Reiterleben*, II, p. 187; Bolte, *Tagebuch*, pp. 30–51, 58–60; Reiche, *Memoiren*, p. 288. Also Jany, *Armee*, IV, p. 47. For the Russian train see Anon., *Reiterleben*, II, p. 255; Boyen, *Erinnerungen*, II, p. 561. Also Pernot, *Transports*, p. 228.
- 76 For Napoleon's operations plans in spring see Napoleon to Ney, 4 May 1813, Foucart, *Bautzen*, p. 18; Napoleon to Berthier, 4 May 1813, Foucart, *Bautzen*, p. 20; Berthier to Ney, 16 May 1813, Foucart, *Bautzen*, pp. 218–19; Napoleon to Bertrand, 12 April 1813, *CN*, XXV, no. 19852; Napoleon to Berthier, 24 April 1813, *CN*, XXV, no. 19902; Napoleon to Eugène, 26 April 1813, *CN*, XXV, no. 19908; Napoleon to Eugène, 28 April 1813, *CN*, XXV, no. 19916; Napoleon to Ney, 28 April 1813, *CN*, XXV, no. 19917; Napoleon to Eugène, 30 April 1813, *CN*, XXV, no. 19933; Napoleon to Eugène, 1 May 1813, *CN*, XXV, no. 19936; Napoleon to Berthier, 13 May 1813, *CN*, XXV, no. 20001; Napoleon to Berthier, 18 May 1813, *CN*, XXV, no. 20024; Napoleon to Bertrand, 18 May 1813, *CN*, XXV, no. 20027. Also Caemmerer and Holleben, *Geschichte*, II, pp. 56–8; Chandler, *Campaigns*, pp. 875–8, 888; Elting and Esposito, *Atlas*, pp. 128, 130. Documents 19917, 19933, and 19936 definitely show that Napoleon expected an allied attack at Lützen, which is denied by Chandler. See Chandler, *Campaigns*, pp. 881, 887.
- 77 For Napoleon's eagerness for battle see Napoleon to Gouvion Saint Cyr, 23 August 1813, *CN*, XXVI, no. 20445; Napoleon to Victor, 2 October 1813, *CN*, XXVI, no. 20683. Also Grouard, *Stratégie*, p. 131.
- 78 For Napoleon's operations plans during the autumn campaign see Napoleon to Marmont, 2 May 1813, *CN*, XXV, no. 19946; Napoleon to Gouvion Saint Cyr, 17 August 1813, *CN*, XXVI, no. 20398; Napoleon to Berthier, 20 August 1813, *CN*, XXVI, no. 20421; Napoleon to Berthier, 23 August 1813, *CN*, XXVI, no. 20442; Napoleon to Gouvion Saint Cyr, 23 August 1813, *CN*, XXVI, no. 20445; Napoleon to Cambacérés, 24 August 1813, *CN*, XXVI, no. 20448; Napoleon to Maret, 24 August 1813, *CN*, XXVI, no. 20449; Napoleon to Macdonald, 24 August 1813, *CN*, XXVI, no. 20454; Napoleon to Maret, 24 August 1813, *CN*, XXVI, no. 20457; Napoleon to Vandamme, 26 August 1813, *CN*, XXVI, no. 20472; Napoleon to General Haxo, 26 August 1813, *CN*, XXVI, no. 20474; Note, Napoleon, 30 August 1813, *CN*, XXVI, no. 20492; Napoleon to Berthier, 2 September 1813, *CN*, XXVI, no. 20502; Napoleon to Berthier, 3 Sept 1813, *CN*, XXVI, no. 20508; Napoleon to Murat, 23 September 1813, *CN*, XXVI, no. 20618; Napoleon to Victor, 2 October 1813, *CN*, XXVI, no. 20683; Napoleon to Berthier, 5 October 1813, *CN*, XXVI, no. 20696; Napoleon to Daru, 6 October 1813, *CN*, XXVI, no. 20710; Napoleon to Murat, 7 October 1813, *CN*, XXVI, no. 20718; Napoleon to Arrighi, 10 October 1813, *CN*, XXVI, no. 20749; Napoleon to Maret, 12 October 1813, *CN*, XXVI, no. 20776; Odeleben, *Feldzug*, pp. 258, 280; Westmoreland, *Memoiren*, p. 17. Also Chandler, *Campaigns*, pp. 902, 913; Elting and Esposito, *Atlas*, p. 132; Grouard, *Stratégie*, pp. 50–2, 130–1.
- 79 Memorandum, Scharnhorst, June 1813, Caemmerer and Holleben, *Geschichte*, II, p. 286.
- 80 For the Trachenberg Plan see Gneisenau to Frederick William, 1 June 1813, Conrady, *Grolman*, II, p. 378; Henckel, *Erinnerungen*, pp. 203, 216; Langeron, *Mémoires*, pp. 206–7; Müffling, *Leben*, p. 55. Also Elting and Esposito, *Atlas*, 133; Freytag-Loringhoven, *Aufklärung*, p. 2; Grouard, *Stratégie*, p. 20. For the text of the conference protocol see Plotho, *Krieg*, I, Annex, no. 1. The wording of the plan was more offensively-minded than its execution. Possibly, verbal agreements reflected the more cautious attitude shown in its execution.

- 81 The reforms of the Austrian and Russian armies during the Napoleonic period also played a role of course.
- 82 ‘Rapport von den Operationen des königlich-russischen Armee-Corps des Generals der Infanterie Grafen Langeron vom 7 August bis 2 September 1813’, Langeron, 3 September 1813, Gneisenau, *Nachlaß*, box 18, sheets 117, 119, 120–1; Order, Blücher, 18 August 1813, Freytag-Loringhoven, *Aufklärung*, pp. 18–19; Order, Blücher, 19 August 1813, Freytag-Loringhoven, *Aufklärung*, p. 28; Order, Blücher, 25 August 1813, Freytag-Loringhoven, *Aufklärung*, pp. 64–5; Order, Blücher, 26 August 1813, Freytag-Loringhoven, *Aufklärung*, p. 71; Langeron, *Mémoires*, pp. 238–9, 274–5.
- 83 For the pursuit after the Katzbach and Leipzig see Blücher to Knesebeck, 1 October 1813, Blücher, *Briefe*, p. 184; Blücher to Bonin, 4 November 1813, Blücher, *Briefe*, p. 191; Boyen, *Erinnerungen*, II, pp. 634, 652; Henckel, *Erinnerungen*, p. 217; Langeron, *Mémoires*, p. 337; Odeleben, *Feldzug*, pp. 374–5; Westmoreland, *Memoiren*, p. 21. Also Freytag-Loringhoven, *Aufklärung*, pp. 84–5, 124; Osten-Sacken, *Armee*, p. 173.
- 84 Langeron, *Mémoires*, pp. 289, 290; Napoleon to Macdonald, 2 October 1813, *CN*, XXVI, no. 20678; Napoleon to Berthier, 3 October 1813, *CN*, XXVI, no. 20684; Napoleon to Macdonald, 3 October 1813, *CN*, XXVI, no. 20686; Napoleon to Macdonald, 4 October 1813, *CN*, XXVI, no. 20692; Napoleon to Macdonald, 4 October 1813, *CN*, XXVI, no. 20693; Steffens, *Erinnerungen*, p. 226.
- 85 For Bernadotte’s behaviour see Boyen, *Erinnerungen*, II, pp. 619, 621, 627–8, 632, 634, 636–7, 655, 658–61, 667, 680; Westmoreland, *Memoiren*, pp. 12, 18. For a more benevolent interpretation see Reiche, *Memoiren*, pp. 305, 316.
- 86 Prussian and German historiography which takes particular pride in Blücher’s decision to join Bernadotte seems to have overlooked that this union of the two armies had already been suggested in the Trachenberg Plan. See Plotho, *Krieg*, I, Annex, no. 1.
- 87 The British envoy had to threaten a cut of subsidies in order to make Bernadotte more cooperative. See Müffling, *Leben*, pp. 85–7. For Prussian operations plans in autumn see Anon., *Reiterleben*, II, p. 235; Blücher to his wife, 25 August 1813, Blücher, *Briefe*, pp. 174–5; Blücher to Knesebeck, 5 September 1813, Blücher, *Briefe*, p. 178; Blücher to Hardenberg, 16 September 1813, Blücher, *Briefe*, p. 181; Blücher to Knesebeck, 1 October 1813, Blücher, *Briefe*, p. 184; Blücher to Bonin, 4 October 1813, Blücher, *Briefe*, p. 185; Boyen, *Erinnerungen*, II, pp. 662, 673, 675–8; Order, Blücher, 2 September 1813, Freytag-Loringhoven, *Aufklärung*, p. 114; Gneisenau to his wife, 9 September 1813, Gneisenau, *Briefe*, 78, no. 66; Henckel, *Erinnerungen*, pp. 212, 219, 222, 226; Müffling, *Leben*, p. 81; Odeleben, *Feldzug*, p. 291; Reiche, *Memoiren*, pp. 328–31; Wedel, *Lebenserinnerungen*, I, pp. 88–9; Westmoreland, *Memoiren*, p. 5. Also Görlitz, *Generalstab*, pp. 58–9, 61. On Austrian and Russian operations plans in autumn see Report, Austrian Army, 29 August 1813, Odeleben, *Feldzug*, pp. 238–40; Report, Russian Army, 14 September 1813, Odeleben, *Feldzug*, pp. 240–1.
- 88 Military historians such as Caemmerer, Chandler, Elting and Holleben tend to blame Ney for the failure of Napoleon’s plan. See Caemmerer and Holleben, *Geschichte*, II, p. 239; Chandler, *Campaigns*, pp. 890–1, 896; Elting and Esposito, *Atlas*, p. 131. It seems, however, that Ney understood that there was an opportunity to cut off the allied retreat. The cause for his mistakes is to be found in the unclear wording of Napoleon’s orders. Napoleon demanded that Ney should link up with Bertrand’s corps on the extreme left and conduct a sweeping manoeuvre into the enemy flank and rear. These two tasks were contradictory since a sweeping manoeuvre would have created a gap between Ney and Bertrand. The mistake is Napoleon’s. He demanded two mutually exclusive actions without indicating which should enjoy priority. Ney’s fear of losing contact with Bertrand, exacerbated by the allied attack of 19 May 1813, induced him to give priority to securing the link with Bertrand. Consequently, the outflanking move was too short to be effective. See Ney to Berthier, 19 May 1813, Foucart, *Bautzen*, p. 273; Berthier to Ney, 20 May 1813, Foucart, *Bautzen*, p.

- 289; Ney to Napoleon, 20 May 1813, Foucart, *Bautzen*, p. 303; Berthier to Ney, 21 May 1813, Foucart, *Bautzen*, p. 315; Ney to Napoleon, 21 May 1813, Foucart, *Bautzen*, pp. 328–30; Jomini to Reynier, 21 May 1813, Foucart, *Bautzen*, p. 331.
- 89 For French tactical training standards see Dupuy, *Souvenirs*, p. 231; Odeleben, *Feldzug*, pp. 11, 223; Reiche, *Memoiren*, p. 282. Also Rousset, *Armée*, p. 150.
- 90 For Prussian tactical command and control see Boyen, *Erinnerungen*, II, pp. 629–30; Henckel, *Erinnerungen*, pp. 213–16; Langeron, *Mémoires*, p. 250.
- 91 For the absorption of new tactical regulations in the Prussian army see Boyen, *Erinnerungen*, I, p. 267, II, p. 591. Also Paret, *Yorck*, pp. 189–90. On Prussian training and training standards see Anon., *Reiterleben*, II, pp. 183, 193; Blücher to Gneisenau, 24 July 1813, Blücher, *Briefe*, p. 169; Blücher to General von Oppen, 24 July 1813, Blücher, *Briefe*, p. 170; Boyen, *Erinnerungen*, II, pp. 605–8, 624–6, 638, 642; Henckel, *Erinnerungen*, p. 229; Hiller, *Denkwürdigkeiten*, p. 165; Jordan, *Briefe*, pp. 18–22, 28, 42, 47; Rahden, *Wanderungen*, I, pp. 22, 35, 65; Reiche, *Memoiren*, p. 297; Westmoreland, *Memoiren*, p. 19. Also Paret, *Yorck*, pp. 166, 209; Schmidt, *Landwehr*, pp. 29, 32. For Prussian tactics see Anon., *Reiterleben*, II, pp. 222–3; Boyen, *Erinnerungen*, II, pp. 630–1, 648–50; Henckel, *Erinnerungen*, p. 183; Lieutenant Herwig to his fiancée, 18 May 1813, Herwig, *Erinnerungen*, p. 41; Hiller, *Denkwürdigkeiten*, pp. 153–4, 162, 187; Müffling, *Leben*, pp. 35–6, 45–6; Odeleben, *Feldzug*, pp. 96, 100–2; Rahden, *Wanderungen*, I, pp. 104–5; Reiche, *Memoiren*, pp. 279, 300–1; Wedel, *Lebenserinnerungen*, I, p. 74. Also Freytag-Loringhoven, *Aufklärung*, p. 82; Caemmerer and Holleben, *Geschichte*, I, p. 289, II, p. 91.
- 92 Wittgenstein, Plan, 1 May 1813, Caemmerer and Holleben, *Geschichte*, II, pp. 45–6; Rahden, *Wanderungen*, I, p. 69. Also Caemmerer and Holleben, *Geschichte*, II, pp. 47–8.
- 93 For casualty figures see Reiche, *Memoiren*, pp. 334–46, 351; Westmoreland, *Memoiren*, p. 191. Also Caemmerer and Holleben, *Geschichte*, II, pp. 39, 182; Elting and Esposito, *Atlas*, p. 143.
- 94 It seems that Gneisenau rather than Blücher himself was the mastermind behind operational planning.

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