

# Operational Command in the Franco-Prussian War

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War erupted between France and a confederation of German states led by Prussia in July 1870. Within a month of the war's first major battle (Wissembourg, 4 August 1870), the French imperial army had been neutralized. Half of it, along with the Emperor Napoleon III himself, had been led off into captivity in the Rhineland while the other half found itself incarcerated in the fortress of Metz. The rapid demise of France's regular army stunned Europe. Before the summer of 1870, this veteran force, inheritor of the Napoleonic legacy and victor in hundreds of colonial encounters stretching from Cochin China to Mexico, had been considered by most informed observers to be the best army in the world.

In Paris, a provisional republican government, led by the fiery lawyer Léon Gambetta, took up the struggle after the fall of the discredited Bonaparte dynasty (4 September 1870). Despite valiant efforts, all Gambetta and his followers could do, however, was to postpone final defeat for five months. On 27 January 1871, with the besieged French capital on the verge of starvation and the provincial levies in the process of dissolution, republican authorities agreed to lay down their arms and treat with the Germans. The terms imposed by the North German Chancellor, Otto von Bismarck, were severe. The French government had to pay a huge indemnity and acquiesce in the annexation of Alsace province and a large portion of Lorraine by the Germans.

Contrary to what many historians have since alleged or implied, the outcome of this conflict was not a foregone conclusion. Efficient mobilization procedures, a substantial numerical superiority, and the new steel cannon of Mr. Krupp gave the Germans an edge but by no means an overwhelming advantage. The formations of Prussia's King William I still had to defeat their adversaries on the battlefield. The easily defensible terrain and hostile population of northeastern France made this a potentially difficult task. Moreover, as the Germans penetrated deeper into the interior of France, the enervating

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effects of distance and friction on transport, communications, and morale took an ever-increasing toll.<sup>1</sup>

Many factors help explain the smashing German victory, but the dramatically different methods used by the two adversaries at the higher command levels to direct their respective armies particularly merit the attention of the modern soldier. While the German system of command and control generally promoted the effective use of manpower and resources, the French system bred uncertainty and confusion. The purpose of the present article is to describe the two methods and show their influence on the course of the struggle. I shall focus on the first seven weeks of the war, from 15 July to 2 September 1870, when the fight was between two regular armies.

The difficulties of command and control, it should be noted, had greatly increased between Napoleon's day and the Franco-Prussian War. Napoleon I had commanded enormous bodies of troops that operated in relatively compact masses under his personal observation. He could traverse the entire extent of the field of battle and make his presence felt at critical times and places during an engagement. By 1870, however, technology (breech-loading rifles, steel breech-loading cannons, railroads, telegraphs, etc.) had fundamentally altered the geography of the battlefield. Commanders above division level could rarely see their entire area of responsibility (stories about the German Royal Headquarters getting a complete vista of the Sedan battlefield from a position on the hill of Frénois belong in the realm of fiction) and were normally too distant from the scene of action to exercise effective control on the flanks.<sup>2</sup>

### *Development of the German Command and Control System*

The German army entered the war with certain organizational and institutional advantages over its French rival as regards command and control in a European setting. Stability and continuity characterized the German military system. A fundamental tenet of the Hohenzollern military establishment since the era of Scharnhorst had been to group and command military forces during peacetime in the same manner as in war. Thus, when hostilities broke out in 1870, the German army was already organized into divisions and corps on the traditional territorial basis and the staffs of these units were in place and functioning.<sup>3</sup>

All the Prussian Chief of Staff Helmuth von Moltke had to do at the beginning of the campaign was to appoint the commanders and staffs of the three field armies into which the combined contingents of north and south

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Germany were formed. Even this last measure had been provided for several years in advance when contingency plans for a war against France were drawn up. Under the German regime, commanders usually selected their own staff officers and, with but few exceptions, got men they knew and trusted. The custom of maintaining senior leaders in their posts for extended periods further enhanced cohesion and facilitated the direction of the army.<sup>4</sup>

Of inestimable benefit to German officers was their participation in the large-scale and, for the era, realistic training exercises held as a regular part of the annual training cycle. (Conducted in the autumn, such maneuvers culminated the training year.) These maneuvers, which reinforced and supplemented the experience acquired by Prussian generals in the war of 1866, proved particularly valuable for corps and division commanders. Nowhere else did such an excellent vehicle exist for conditioning senior leaders to direct large bodies of troops in a setting and on a scale that one would likely find in a future war on the continent.<sup>5</sup>

The task of cementing Germany's army together fell to the General Staff. General Moltke, who had headed this organization since 1857, recruited his staff officers from the prestigious *Kriegsakademie*, selecting 12 from an annual graduating class of about 40.<sup>6</sup> Since only the more promising officers were admitted into the *Kriegsakademie* in the first place, the General Staff Corps came to represent the *crème de la crème* of the Prussian military.

Moltke gave the members of this select group a broad and general military education, which included instruction and practical training in all arms of the service and rotation between staff and line assignments so that they did not lose touch with troops or develop an overly theoretical orientation. As befitted a student of the great German geographer Karl Ritter, the Prussian Chief of Staff also labored to instill in his disciples a geographical perspective appropriate to the operational level of war (a quality that Clausewitz labeled *Ortsinn*, or sense of place). Large-scale maneuvers, frequent and elaborate map exercises, and carefully laid out staff rides were some of the tools used to accomplish this end.

Over time, Moltke managed to impress his personal signet upon this body of officers, infusing it with his ideas, spatial perspective, and military methodology. By 1870, many brigade and division commanders had personally studied under Moltke, and at the side of every corps and army commander stood a chief of staff, a member of the General Staff Corps who, along with his superior, was held directly responsible for the performance of his organization. There thus arose within senior command circles a remarkable uniformity of doctrinal belief. When faced with a particular problem or set of circumstances, German generals could be expected to think and act along roughly similar lines.

Overshadowing all else in its influence on the command structure was a factor rarely even mentioned by modern commentators on the war of

1870—namely, Prusso-Germany's geopolitical vulnerability. Located at the crossroads of Europe astride the North European Plain and possessed of open and vulnerable frontiers in both the east and west, the kingdom of the Hohenzollerns occupied a precarious strategic position. To ameliorate this predicament and ward off interference in Germany's internal affairs, Prussian statesmen strove to form the motley assortment of German states into a single political and economic unit with Berlin as its focus.

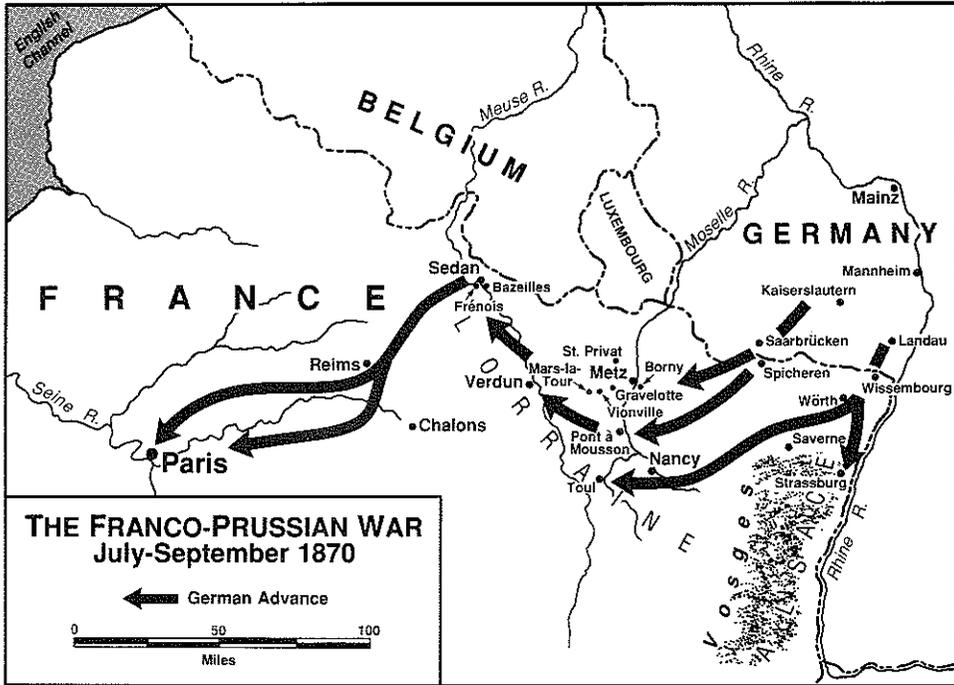
Prusso-Germany was in 1870 what students of geopolitics like Halford Mackinder and Karl Haushofer have called a continental power. Its interests, for the most part, were confined to its own territory and to adjoining areas of Europe. This condition carried with it distinct military advantages, negating to a large extent the lack of full political unity. It allowed German military planners to channel all their energies into preparing for a relatively few likely contingencies and to gear the organization of their army toward a restricted set of objectives. Such a narrow focus promoted stability, efficiency, and unity of effort, lending to the command structure a coherence unattainable in nations with more diffused concerns.

### *Development of the French Command and Control System*

West of the Rhine, military development had followed a very different course. Improvisation and an attitude of *debrouillez-vous* (we'll muddle through somehow) characterized the French army of the mid-19th century. When war was declared, corps and division organizations did not even exist. Despite the pleading of the Emperor, war ministry officials had refused to adopt a territorial structure like that of the Germans. Such a move, they feared, would breed particularism, induce the army to make common cause with the people, and ultimately destroy the nation's fragile political unity. This refusal meant that upon mobilization, troop units had to be stripped of their elite cadres to provide for the command and communications infrastructure.<sup>7</sup>

Initially, Napoleon III organized his forces into eight separate corps with no intermediate headquarters between the corps and the supreme command. It soon became apparent that this arrangement would not work, the span of control being too wide. As a result, the force was soon broken down into two field armies, each with two corps, and a sizable reserve. The general officers appointed to fill these new commands, however, retained control of their old corps, and the new field armies were not provided with a staff.<sup>8</sup>

As might be expected, the hastily improvised staffs that were scraped together at the beginning of the campaign were anything but cohesive and productive entities. Often, the chief of staff did not know his subordinates and they in turn did not know each other. Much time was spent assessing individual capabilities and learning to work together as a unit. To make matters even worse, commanders usually did not get to choose their chief of staff; he was forced



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upon them. This, of course, only generated further disruption and created a turbulent atmosphere in which personal animosities and rivalries flourished.

Nowhere were the baleful effects of such internecine squabbles more evident than in the relationship that developed between the commander of the French Army of the Rhine, Marshal Achille Bazaine, and his Chief of Staff General Hugues Louis Jarras. Napoleon III imposed this latter officer on Bazaine, who neither knew nor trusted Jarras. The secretive Bazaine obstinately refused to let his principal assistant in on his intentions, cutting him completely out of the planning process. He relied instead on his two nephews, both officers of junior rank and modest abilities. Jarras's role was limited to supervising minor details of execution. With no one to direct and coordinate the activities of the staff, it is little wonder that slowness, hesitancy, and indecision marked the movements and actions of the French Army of the Rhine throughout its brief existence.

Lack of cohesive staffs was only one of the problems that beset the French command structure. Another was that few senior officers had the vaguest notion of how to guide and maneuver large units. Even such basic tasks as assigning operational sectors and establishing well-defined boundaries between divisions and brigades proved too much for many of them.<sup>9</sup>

Before the war, Napoleon III had recognized this shortcoming in his army and had tried to remedy it by establishing a training area near Chalons that would accommodate corps-sized formations. Unfortunately for the French, the exercises subsequently held at this site were of the scripted, parade-ground

variety, where appearance and precision counted more than tactical skill and professional knowledge.<sup>10</sup>

French experiences in limited and colonial conflicts—North Africa, Indo-China, Mexico, Italy, the Crimea—had done little to prepare them to wage what contemporary commentators labeled “great war.” In many of these small wars, the French faced ill-equipped, poorly disciplined, and unorganized opponents who stood little chance of success in pitched battle. Even their experiences with the Austrians and the Russians were of limited value in preparing them to meet the legions of a united Germany.

Moreover, these peripheral conflicts accustomed officers to think and *act* relative to a small geographic area. No French general in 1870 had previously commanded a body of more than divisional size. While at the tactical level French leaders exhibited a reasonably well-developed geographic sense (especially when on the defensive, which was most of the time), the higher echelons of command displayed an astonishing lack of Clausewitz’s *Ortsinn*—sense of place. In some of the war’s most pivotal battles (Wörth, Spicheren, Gravelotte, St. Privat), army and corps commanders inexplicably neglected to fortify key terrain features on their operational flanks, in effect handing the Germans the linchpin of their entire defensive position. Often, the French won the fight on the tactical plane only to lose it on the operational.

Further evidence of confined geographic thinking is reflected in French reconnaissance and screening arrangements. Whereas German army commanders pushed out patrols 40 to 60 kilometers in front of their advancing columns, French *chasseurs* preceded their army by only seven to ten kilometers, sometimes even less. According to the German official account, French patrols rarely ventured out past the outpost line. This explains why units of the German First Army were able to get within two and one half miles of the Metz fortress without being detected.<sup>11</sup> Such flawed methods should not be attributed primarily to French apathy or defects in the military education system. Clearly, most French generals possessed a theoretical understanding of what should be done. The problem was that neither they nor their staffs had much practice operating or thinking on such an extensive territorial scale.

French tendencies toward local optimization were reinforced by the “mathematical” orientation of the officer corps—an orientation that had been evident to a greater or lesser extent since at least the days of Vauban. The Crimean War (1854-1856) had made the French army the most respected military force in Europe. French mathematical genius had shone brightly there because it was essentially a siege.<sup>12</sup> On the battlefields of Alsace and Lorraine, however, the skills that had served them so well at Sebastopol and in the conquest of their empire proved much less relevant. In fact, they often were detrimental since they led senior leaders to seek tactically advantageous solutions at the expense of the wider operational scheme.

Further, the plague of specialization afflicted France's military. Despite assertions to the contrary, the imperial army had plenty of competent infantry, cavalry, and artillery officers. The rub was that few of them had any idea of how to conduct what we today call combined arms operations. The general staff corps faced a similar predicament. Excellent mathematicians, skilled topographers, and capable draftsmen abounded, while generalists who could orchestrate the employment of the three combat arms were in desperately short supply.<sup>13</sup> Finely honed coordinative skills at the corps and army level had not been necessary to defeat many of the opponents they had encountered over the five previous decades.

When considering French methods of command and control, it is above all necessary to recall that France in the mid-19th century was a colonial power with interests and territories spread around the globe. Since 1830, when Charles X dispatched an expeditionary force to North Africa, France's soldiers had been busy acquiring and pacifying a vast empire. The adversaries they had to face and the geographical settings in which they had to operate were numerous and diverse. As a result, the French military establishment developed a broad, diffuse strategic orientation. Unlike their neighbors to the east, French soldiers could not restrict their view to meeting a limited number of threats over a circumscribed area. Hence, the concentrated focus and coherence that characterized German planning and organization were largely absent.

### ***German Command and Control Procedures***

The German method of writing, transmitting, and monitoring the execution of operations orders greatly facilitated command and control. The format of their orders bore a striking resemblance to that currently used by the US Army. First, a synopsis of the enemy and friendly situations was provided; then, the mission and commander's intent were stated in general terms. The concluding portion contained objectives and specific instructions for each subordinate unit. As the campaign progressed, some corps headquarters standardized the order even more by assigning numbers to the different paragraphs. Written orders were the rule down to regimental level. Below that, most orders were issued verbally.<sup>14</sup> When possible, coordination was achieved by having a responsible staff officer from each subordinate command receive the order at the regularly scheduled operations briefing. In this way, each command could see how adjacent units fitted into the overall operational plan.

Lucidity, brevity, and simplicity were the qualities that the Germans looked for in an order. Needless detail was avoided; subordinates were provided with only what they needed to know. Instructions were couched in general terms, with many decisions about matters of detail left to subordinate units. Some German orders, in fact, were the very models of conciseness. A single directive from the Prussian Royal Headquarters, dated 21 August 1870, sufficed to guide

the movements of both the Army of the Meuse and the Third Army (taken together about 200,000 men) for a period of four days. It did not fill one printed page. An order issued by the same headquarters less than a week later instructing the Third Army to change its axis of advance from east-west (toward Paris) to north-south (toward Sedan) was more remarkable still; it took up only six lines!<sup>15</sup> Often, higher headquarters issued directions (*Directiven*) rather than formal orders. These communiqués did not prescribe a course of action but merely set forth the overall design of the commander. They were meant to guide the subordinate leader in the formulation of his independent solution.<sup>16</sup>

The German formula produced economies in both time and manpower. The Second Army employed only six assistant staff officers to draft and pass along instructions to its six assigned corps. The speed of composition, transcription, and transmission attained with this system was of paramount operational importance because the staffs of even the higher formations normally had only five to six hours to receive, write, and disseminate their orders. Rapid delivery had important side effects; word got to the troops quickly, permitting them to make thorough preparations and get sufficient rest.<sup>17</sup>

Such German practices produced prodigies of operational responsiveness. Orders setting the First and Second German Armies in pursuit of Marshal Achille Bazaine's retreating Army of Lorraine arrived at their respective headquarters between midnight and 0230 hours on the morning of 12 August. Despite darkness, rain, and mud, every division in these two armies was ready to move out by six o'clock that same morning.<sup>18</sup> Such feats were the rule rather than the exception.

Germany's military leaders realized, however, that written orders alone, even of the highest quality, could not guide with sufficient touch and discrimination an army of the size that Moltke and Roon had assembled. Something more was necessary. They hit upon the expedient (used extensively by the Prussians in the war of 1866) of dispatching knowledgeable staff officers, thoroughly familiar with the intentions of the commander and well-versed in the operations of all arms, to keep open the channels of communications with subordinate units. These officers possessed a wide-ranging and independent authority, being empowered to interpret orders and even change them if the situation called for it. This management device, which Martin van Creveld has labeled the commander's "directed telescope," promoted unity of action and ensured that units proceeded according to the spirit, not the letter, of written instructions.<sup>19</sup>

Although German practices might appear as little more than common sense today, at the time they were almost revolutionary. As late as the 1864 campaign against Denmark, the antiquated command and control methods of the octogenarian Prussian Commander-in-Chief, Field Marshal von Wrangel, reflected the age of Frederick more than the age of Moltke.<sup>20</sup> By 1870,

however, the Germans had developed a way of controlling their forces that allowed them to adapt quickly to changing tactical and operational situations.

A distinctive feature of the German command and control system was the autonomy granted subordinate officers. From the king down to the battalion commander, German leaders were impressed with the necessity of affording freedom of action to their underlings. Such decentralization, they recognized, promoted rapid execution, the judicious use of resources, and discipline (since the troops more readily respected and obeyed a leader who possessed independent authority).

Even more important from an operational perspective, however, it encouraged the exercise of initiative. It was considered preferable to run risks and allow subordinates to make mistakes than to stultify their initiative by an ill-timed and ill-advised intrusion into details. On their part, subordinate leaders often reacted sharply when they perceived that superiors were poaching on their preserve. One German corps commander, for example, flew into a rage when his army commander specified that backpacks should be worn and not transported in wagons.<sup>21</sup>

Instances in which the initiative of subordinate leaders saved the day for the German army are legion. At Wissembourg, Wörth, Spicheren, Borny, and scores of other encounters later in the war, German generals, thoroughly familiar with the broad designs of their superiors, committed their units to battle and marched to the sound of the guns without awaiting instructions or permission.

Perhaps the most momentous instance involved the commander of the Prussian III Corps, General Constantin von Alvensleben. His move to interject his corps between Bazaine's retreating formations and Verdun was not the design of the German Royal Headquarters nor of the Second Army. Rather, it was an improvised action conceived and undertaken by Alvensleben himself.<sup>22</sup> It was a daring—some would even say foolhardy—venture, and if Alvensleben had been faced with a more enterprising opponent it might well have ended in disaster. Nevertheless, the fact remains that it was the direct result of the initiative and vision displayed by the III Corps Commander that Bazaine was cut off from the interior of France and that ultimately over half of France's regular army was for all practical purposes taken out of the war.

Two caveats must be added to these comments about the German system of command and control. First, there was a limit to the independence granted subordinates. If the situation demanded it, detailed guidance was given and execution closely monitored.<sup>23</sup> Second, operational autonomy involved risks, and the decentralized command and control system of the Germans sometimes thwarted the designs of the Royal Headquarters, on occasion even leading the army to the brink of disaster. The precipitate moves of General von Steinmetz, the commander of First Army, brought on the battle of Spicheren (6 August 1870), an encounter that the Supreme Command had desperately wanted

to avoid. This overly aggressive action upset Moltke's strategic timetable and forced him to revoke his plans.<sup>24</sup> Later, the Chief of Staff gave Prince Frederick Charles, commander of the German Second Army, the mission of overtaking and corralling Bazaine's army on its retreat from Metz, issuing his subordinate what amounted to an operational blank check. On the flimsiest of indications, Frederick Charles concluded (quite wrongly) that Bazaine had made good his escape from the vicinity of Metz. Detaching only the Prussian III Corps to deal with what was presumed to be a rearguard at Vionville, the Prince threw the bulk of his army to the west in a wide enveloping motion away (as it turned out) from the main body of the French.<sup>25</sup> This course could have been disastrous, but fortunately for Frederick Charles the unenterprising Bazaine was at the helm of the French army. Although the Germans sometimes had to pay a high price for decentralization, the end result was well worth it, for it gave the German army a flexibility and responsiveness that its adversary, with its cumbersome command and control arrangements, could not hope to match.

### ***French Command and Control Procedures***

French methods of command and control bore little resemblance to those of their adversaries. Operations orders in the imperial army tended to confuse rather than enlighten their recipients and obstruct rather than facilitate the direction of tactical formations. A cardinal problem was that French commanders were not in the habit of communicating their intent to subordinates in their orders. One notable instance of this deficiency occurred on 14 August after General Margueritte's cavalry division had successfully counterattacked and dislodged a German force that had seized Pont à Mousson, a strategic crossing site over the Moselle River. Because Marshal Bazaine, the commander of French forces in Lorraine, had not made his intentions known to his aggressive subordinate, Margueritte could see no compelling reason to hold on to the site.<sup>26</sup> Consequently, he evacuated the town and forfeited control of it to France's enemies (who promptly took advantage of this windfall and poured men and equipment across the Moselle).

Moreover, senior leaders rarely told their subordinates anything about the intentions, dispositions, or compositions of enemy forces in their written directives. In the instructions that guided French forces in the war's first skirmish at Saarbrücken (2 August 1870), not one of the three corps commanders involved in the action made any mention of the enemy whatsoever.<sup>27</sup>

Written orders in the French army were, as a general rule, extremely long and detailed. Corps and army commanders would concern themselves with the minutia of security measures for a baggage train and specify at what time regiments would eat breakfast, matters more properly falling within the province of junior officers.<sup>28</sup> Orders even for the most routine operations often filled many pages, length being equated with expertise and sophistication.

Such practices stymied the initiative of subordinates and bogged down senior officers in a morass of detail.

Yet, in their more critical aspects, French orders were often surprisingly vague and incomplete. Bazaine's order to his army on 15 August regulating their projected retreat on Verdun is a classic of imprecision and indecision: "We will *probably* set out in the afternoon," he told his bewildered corps commanders. Marshal MacMahon even failed to specify a line of retreat in his written instructions to his forces on the eve their catastrophic defeat at Sedan.<sup>29</sup> The omission was especially unfortunate because a few hours after he issued the order, MacMahon was incapacitated by a shell fragment and had to relinquish command of the army.

The way in which the French drafted their orders had a number of debilitating effects on the army. For one thing, it greatly increased the time of transmission and execution so that the responsiveness of French units normally left much to be desired. It took hours, sometimes even a full day, for a French regiment just to break bivouac and get on the move. Moreover, the confusion inherent in such a system resulted in a continual round of orders and counter-orders, sapping the morale and energy of the troops, adding many miles to the march, and preventing the men from getting sufficient rest.<sup>30</sup> Insubordination and poor discipline were the inevitable by-products. Little wonder that after Wörth and Spicheren, some units in the imperial army were on the verge of mutiny, with soldiers openly insulting their officers and denouncing the regime.

To make matters worse, there was no device like the "directed telescope" of the Germans to coordinate operations and ensure unity of effort. To be sure, senior commanders dispatched staff officers to subordinate headquarters to perform various liaison functions, but these agents acted as couriers rather than as officers with independent authority.<sup>31</sup> The propensity of the French to proceed in this way is at least partially attributable to the centralization that has been such a prominent characteristic of the French military tradition.

The absence of a "directed telescope" produced tactical isolation, inhibiting cooperation between units. At the battle of St. Privat (16 August 1870), Marshal Canrobert, commander of the VI Corps, and General Frossard, II Corps Commander, knew nothing of the other's plans or dispositions, although their units abutted one another on the French defensive line.<sup>32</sup> The French sorely needed an authoritative man on the ground because neither their method of drafting orders nor their haphazard staff procedures worked to alleviate their coordination problems.

Frederick Engels observed that excessive centralization crippled the French war effort.<sup>33</sup> (By this and other assessments he made about the campaign in the columns of the *Pall Mall Gazette*, he proved he was an insightful war correspondent as well as a profound social critic.) French logistical arrangements illustrated Engels' contention. Prince Georges Bibesco, an officer on the

staff of General Douay's VII Corps, complained with only slight exaggeration that a mess soup kettle could not be issued without the written authorization of the intendant-general in Paris.<sup>34</sup>

Field generals, even senior ones, also operated at the end of a short leash, being expected to adhere closely to a prescribed course of action. Battalion commanders, according to one officer who served in the Army of the Rhine, usually did little more than pass along messages from the colonel. Before the war, when a brigade commander wanted to know the status of a company's linen supply, it was not uncommon for him to dispatch the battalion commander or even to go himself to check on the matter.<sup>35</sup> During the campaign, corps commanders sometimes issued orders directly to battalions, skipping division, brigade, and regimental headquarters.

This rigidly centralized command and control system had pronounced detrimental effects on the army's operational capabilities. Foremost among them, perhaps, was that it killed initiative. Officers knew that safe inaction was wiser than risky adventure. (French generals, it appears, above all else wanted to avoid censure if things went awry, seemingly fearing such condemnation far more than death.) At Mars-la-Tour (16 August 1870), General Michel and his brigade of armored cavalry sat idly by and watched as a body of Prussian cavalry hacked to pieces a smaller force of French dragoons. The thought apparently never occurred to Michel to ride to the aid of his sorely pressed comrades. At Bazeilles (1 September 1870), an even more revealing incident occurred. A certain engineer officer had been entrusted with the emplacement of demolitions under a bridge across the Meuse. Although the Germans threatened to seize this structure, incredibly the officer refused to denotate the charges until he had received specific authorization to do so. The order never came and the bridge was never blown.<sup>36</sup> The Germans used the bridge to funnel supplies and reinforcements into Bazeilles throughout the ensuing 12-hour battle.

The French colonial experience reinforced the centralizing proclivity of the military. The military forces that took part in these campaigns were not large by European standards. To venture out in the countryside, units were formed into comparatively small columns. The remoteness of the theater and the hostility or indifference of the indigenous population dictated that the leader keep tight rein on his men. All supplies, ammunition, and amenities had to be carried by the soldiers or brought along in the baggage train because there was no guarantee that the area of operations would make up for any logistical deficiencies. There was little room for miscalculation, so it was only prudent for the officer in charge to ensure personally that all necessary arrangements had been made beforehand. Hence, he tightly controlled his underlings and issued long, detailed, and usually complicated operations orders.<sup>37</sup> Although well-suited to a colonial environment, such methods proved ruinous when applied against a first-class European opponent. French generals were conditioned by decades of

close supervision, detailed guidance, and a centralized command structure; it is little wonder that they behaved as they did in 1870.

### *Conclusions*

Modern observers tend to focus on the German and ignore the French experience in the war of 1870. In light of the outcome of the struggle, this is understandable. Yet for US military officers, the French case is in many respects more relevant. Like its Gallic counterpart, the US Army has traditionally had a mathematical/technical bent, with engineer and artillery officers being accorded pride of place within the military profession. A certain similarity in tenor, outlook, and methodology has been the result. As we have seen, however, the improvisational genius of the operational artist will always prevail over the mechanical rule-mongering of the mere campaign artisan. Thus, in its schools and doctrine, the US Army must consciously encourage development of the former trait.

Moreover, the United States, like France in the mid-19th century, is a power with worldwide interests and commitments. It cannot afford to restrict its attention to a few homogeneous contingency areas. From heavy armor threats in the sands of the Persian Gulf to guerrilla menaces in the jungles of Central America, US military ventures will most likely be of an ad hoc nature with command and control structure and organization dependent upon the environment, topography, and local conditions. If French failures do not suggest any solutions to the US strategic dilemma, they do highlight the difficulties that may be encountered if command and control arrangements are not tailored to environmental and spatial realities.

Finally, the war of 1870 points to a departure between tactical/operational doctrine, on the one hand, and geopolitical objectives, on the other. France's wars of empire in the half century after Waterloo in large measure conditioned the way generals fought and commanded their units in 1870. As Paddy Griffith has recently pointed out, the French problem was not that its generals were particularly ignorant or apathetic.<sup>38</sup> Most were, in fact, capable soldiers who possessed a theoretical understanding of what should be done. Unfortunately for the French, the colonial experience of the officer corps over the previous 55 years had so profoundly affected its perspective and outlook that it was unable to make the requisite intellectual reorientation when war broke out (let alone adjust the time-honored habits, tactical methods, and standard operating procedures of line regiments). Changes of such scope require years, perhaps even decades, of practice and conditioning. They cannot be effected by the mere revision of a manual. Therefore, if we can believe the lessons of history, an important challenge facing American military professionals in the coming decade is that of discriminately assimilating the experiences of the nation's past wars without becoming a slave to them.

Only thus can we assure that our military forces are flexibly and realistically prepared to accomplish any mission the times may thrust upon them.

#### NOTES

1. Patrick O'Sullivan and Jesse W. Miller, *The Geography of Warfare* (London and Canberra: Croom Helm, 1983), p. 45.
2. Victor Derrecagaix, *La Guerre Moderne* (Paris: 1885), I, 75.
3. The Prussian contingent was the core of the German army. The south German states (Bavaria, Wurtemberg, Baden, and Hesse) and those states incorporated into the North German Confederation after the war of 1866, however, all contributed sizable contingents to the war effort. Their forces closely conformed to the Prussian military model. Even Bavaria, which adamantly asserted its political and military autonomy, retained only symbolic vestiges of its military identity.
4. Derrecagaix, I, 31.
5. Gebhard Zernin, *Das Leben des Generals August von Goeben* (Berlin: 1895-97), II, 172.
6. Michael Howard, *The Franco-Prussian War* (London: Granada, 1979), pp. 24-25.
7. Le Comte de la Chapelle, *Les Forces Militaires de la France en 1870* (Paris: 1872), p. 4.
8. Michel Lhospice, *La Guerre de 70 et la Commune en 1000 Images* (Paris: Cercle Europeen du Livre, 1965) p. 82; and Prussia, Armee, Grosser Generalstab, Kriegsgeschichte Abteilung, *Der deutsch-französische Krieg, 1870-71* (Berlin: 1872-1906), I, 142.
9. France, Army, Etat-Major, Section Historique, *La Guerre de 1870-71* (Berlin: 1872-1906), I, 24.
10. David Ascoli, *A Day of Battle: Mars-La-Tour, 16 August 1870* (London: Harrap, 1987), p. 52.
11. *Der deutsch-französische Krieg*, I, 291.
12. Friedrich Engels, *Der deutsch-französische Krieg 1870/71* (Berlin: Dietz, 1957), p. 146.
13. Un Officier d'Etat-Major de l'Armee du Rhin, *Les Causes de nos Desastres* (Bruxelles: 1871), pp. 93-94.
14. Kraft Carl zu Hohenlohe-Ingelfingen, *Strategische Briefe* (Berlin: 1887) II, 19, 30, 52.
15. *Ibid.*, II, 46.
16. *Der deutsch-französische Krieg*, I, 106.
17. Hohenlohe-Ingelfingen, II, 47, 52. When separated from subordinate units by considerable distances, higher headquarters relied on the telegraph to pass their instructions. Normally, this mode of transmittal was limited to commands at army level and above. At lower echelons, where the focus of the commander was geographically narrower, messengers and informal command conferences were the preferred methods.
18. *Ibid.*, I, 53.
19. Martin van Creveld, *Command in War* (Cambridge, Mass.: Harvard Univ. Press, 1985), p. 142. See also J. von Verdy du Vernois, *With the Royal Headquarters in 1870-71* (New York: Greenwood Press, 1968), p. 67.
20. Kraft Carl zu Hohenlohe-Ingelfingen, *Aus meinen Leben* (Berlin: E. S. Mittler, 1918), p. 153.
21. Zernin, II, 277.
22. Generalstab, Kriegsgeschichtliche Abteilung, *Der Krieg zwischen Frankreich und Deutschland in den Jahren 1870/71* (Berlin: 1889), p. 76.
23. *Der deutsch-französische Krieg*, I, 106.
24. *Ibid.*, I, 105.
25. Ascoli, p. 157.
26. Lhospice, p. 40.
27. *La Guerre de 1870-71*, IV, 9-12.
28. *Ibid.*
29. George Bibesco, *Campagne de 1870: Belfort, Reims, Sedan* (Paris: 1872), p. 132; and Derrecagaix, II, 212.
30. Bibesco, p. 75; and Engels, p. 219.
31. *Les Causes de nos Desastres*, p. 18.
32. Ascoli, p. 16.
33. Engels, pp. 168-69.
34. Bibesco, p. 20.
35. *Les Causes de nos Desastres*, p. 42-43.
36. Bibesco, p. 128.
37. Derrecagaix, I, 504.
38. Paddy Griffith, *Military Thought in the French Army, 1815-51* (Manchester and New York: Manchester Univ. Press, 1989), pp. 3-5.