

CSI REPORT

No. 9

The Directed Telescope: A Traditional
Element of Effective Command



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2. Prepare and present instruction in military history at USACGSC and assist other USACGSC departments in integrating military history into their instruction.
3. Serve as the U.S. Army Training and Doctrine Command's executive agent for the development and coordination of an integrated, progressive program of military history instruction in the TRADOC service school system.

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The Directed Telescope: A Traditional
Element of Effective Command

by

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A Historical Perspective Prepared for the Organizational
Effectiveness Center and School (OECS)

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PREFACE

This Combat Studies Institute Report was prepared in response to a request by the United States Army Organizational Effectiveness Center and School (OECS) for historical support. Specifically, the OECS asked CSI to conduct an historical study of commanders use of aides, liaison officers, observers, and other representatives in the course of campaigns and battles. Intending to use the study to support the development of new doctrine concerning the role of OE staff officers in combat, the OECS posed a number of investigative questions:

What functions did such personnel perform during combat?

In what ways did such personnel enhance the command and control of units, generate initiative, create agility and depth and contribute toward the synchronization of combat power during combat?

What special preparation and/or training did these personnel receive?

What qualities, attributes, competencies and/or capabilities did these personnel possess?

For whom did these personnel work?

How did these personnel go about performing their duties?

How were these personnel selected?

Who used personnel so described? Comparisons and contrasts between the battlefield effectiveness of units that used such personnel versus units that did not.

What authority did these personnel possess?

Within these guidelines this study proceeds from a general description of aide/liaison systems of the pre-nineteenth century to a more detailed assessment of those of the Napoleonic and modern periods of military history. The broad mandate of the study and the limited time available prohibited a more detailed analysis. Furthermore, throughout this report, the historical cases selected depended upon the availability of source material at the Command and General Staff College. Nevertheless, the

historical examples used illustrate the effectiveness of aides, liaison officers and other agents of the commander in the command and control process. Historical evidence revealed for the most part that the function, authority, and utility of these types of officers were highly situational and as a result varied widely over time and space. Their use and organization have seldom been formally defined, especially in regards to the intimacy of relationships with commanders and the means in which mutual trust and confidence were instilled.

While the OECS request established the research objectives for this report, no attempt was made to link the study with developing OE doctrine. Nevertheless, it is hoped that the material presented will assist the OECS in the formulation of doctrine for OESOs on the AirLand Battlefield and for that matter liaison officers in general. Moreover, the report is valuable and can stand on its own merits by virtue of the information and analysis which it provides on the subject of techniques of command.

THE DIRECTED TELESCOPE: A TRADITIONAL
ELEMENT OF EFFECTIVE COMMAND

If you can fill these positions with proper
officers . . . you might hope to have the
finest army in the world.

General Robert E. Lee
21 March 1863

The study of the evolution of command, a principal element of the art of war, reveals that its most fundamental characteristics have remained unchanged throughout time. Although these command functions appear eternal, the command system, or the means through which command is exercised, has experienced centuries of almost continuous development. Consequently, organizations, techniques, and procedures for command have been constantly redefined in order to meet the demands of an increasingly sophisticated and complex art. Despite modification, however, common patterns exist within this great diversity of command systems. In fact, the degree of similarity is remarkable. Many of military history's most enduring command system characteristics seem to transcend time. They appear as historical constants; timeless as the lasting functions of command they are designed to support. Moreover, there are several distinctive features of the traditional "line and staff" organization that have remained virtually unchanged. They stand unaltered in both theory as well as application despite centuries of organizational variation and technological advances. One of the more important fixed elements of command is what historian Martin Van Creveld has referred to as the "Directed Telescope." Van Creveld asserts that from "Plato to NATO" command in combat consists of a search for certainty more than anything else. The commander's unending quest for certainty in battle has, however, never been fully satisfied. As a result, the development of the most rapid, reliable, and efficient means of obtaining tactical information, communicating critical orders and controlling subordinate units has historically presented commanders at every level with a continuous as well as elusive challenge.

The "Directed Telescope," or more specifically, the use of specially selected, highly qualified and trusted young officers as special agents or observers for the commander has been a fundamental method of responding to this inveterate challenge. These young officers have been popularly referred to as the "eyes" of the commander. Throughout military history the use of officers in this capacity has been a customary source of critical battlefield command information. The utility of these "special agents," whether they be aides, liaison, or special staff officers, has been proven in war after war for thousands of years. The "Directed Telescope," has survived despite successive waves of information gathering communications

technology. From the loyal aides-de-camp of the Napoleonic era to the British command liaison officers of World War II, command and staff liaison systems, an often overlooked technique of command, have played an extremely important role in successful command and control at the tactical, operational, and strategic levels of warfare.

As stated earlier, the role of the trusted subordinate, as a skilled observer and objective advisor, is a traditional tool of command. While it may appear to many as an anachronism, modern commanders and military theorists can ill afford ignoring the time honored "Directed Telescope" in their development of command systems capable of meeting the Army of Excellence's AirLand Battle command and control responsibilities. An historical analysis of the role played by this acknowledged means of exercising effective command in combat can also greatly assist the development of doctrine for a modern updated version of the historically proven system.

Little doubt exists among military historians that the "Directed Telescope" system is as old as the military staff itself. Even the earliest commanders in history employed orderlies of some type to assist them in the execution of command. As a result, a general survey of the development of command systems employing staff officers in that overall capacity, offers an excellent background for a more detailed analysis of similar techniques in the modern era, especially those since the start of World War II and afterward. Certain periods of military history have obviously been more productive than others in their contributions to the evolution of the military staff in general, and the "Directed Telescope" in particular. In that regard, the development of aide, advisor and liaison systems can be generally traced over three distinct periods in the history of warfare; the pre-nineteenth century era, Napoleonic era and the modern era.

The Pre-Nineteenth Century Era

Surprisingly, the armies of this period displayed a remarkably high degree of efficiency even by modern standards and, as a result, required if not comprehensive, at the least functional staffs. Included among these early staff officers were aides-de-camp. The aides' primary duties were to assist in administering the affairs of the armies, and of even greater importance to our study, to help commanders in the overall execution of the various responsibilities of command.

Although numerous references from this period refer to discussions between commanders and staffs, it is with the development of Alexander the Great's staff organization (actually that inherited from his father Philip) that many strong similarities between it and more modern systems can be found. Alexander's staff was specifically designed to support his widespread campaigns and included officer specialists for engineering and siege operations, and younger officers "somatophylaxes," who served under

Alexander's personal direction except when entrusted with the command of subordinate units.¹ Among other duties these relatively junior officers served as aides-de-camp and heralds. Their responsibilities included assisting in the command and control of the often widely separated columns of Alexander's army as couriers and observers. They were, in essence, the young Greek conqueror's "eyes." In the role of heralds, Alexander's aides were used in communicating with the commanders of opposing camps. These officers obviously held their commander's full trust and confidence in order to be entrusted with such sensitive and critical details.

Also included within Alexander's staff was a small advisory circle of select officers, among them several "somatophylaxes." This small group of trusted staff officers acted as an informal council of war. Alexander's council of staff officers formed a pool of highly qualified and trusted officers. They were routinely tasked with the performance of special missions and for filling high military and administrative positions. Thus, Alexander's staff council and "somatophylaxes," set an early pattern for the "Directed Telescope" system.

Alexander's example of using young officers as aides in exercising command and control and the probable employment of similar systems by many famous commanders before him, (although this is difficult to substantiate), continued with the staff developments of the Roman Army under Scipio Africanus Major (237-183 BC) and Julius Caesar (100-44 BC). As with Alexander, Scipio and Caesar both employed junior officers on their staffs. Their volunteer aides were called "contubernales." As with their Greek predecessors they acted as observers and trusted couriers for top priority missions.² Additionally, both Roman leaders held a close circle of these subordinates as mess companions. This group primarily consisted of aides-de-camp and close political and military advisors. The "contubernales" appeared to have the same general duties and responsibilities as Alexander's "somatophylaxes"; that of gathering critical information and performing important missions for the commander. Essential qualities were good judgment, military skill, and most of all absolute trust and loyalty to the command.

Whatever their official titles, these primitive forerunners of modern command and staff liaison systems demonstrate that even the earliest military commanders had an appreciation of the many problems associated with exercising effective command and control during campaigns and battles. This concern continued through the Middle Ages. For example, King Edward III used his aides with great effect as information gathering agents and couriers at both Crecy and Poitiers.³ For the most part, the original observer and advisor role of these early "Directed Telescope" systems changed little until the Napoleonic era, when the military staff underwent dynamic changes resulting in the emergence of formal aide-de-camp and liaison systems.

The Napoleonic Era

The advent of firearms in the sixteenth century required military formations to become more widespread and as a result more disciplined. During the era of Gustav Adolphus and Wallenstein, emphasis was placed on better organization and control. Staffs grew in size, structure and definition was introduced. Aides-de-camp began to function in what we now define as their traditional role as special assistants to the commander. For example towards the end of the Seven Years War (of the mid eighteenth century) Frederick the Great, after the deaths of his many senior advisors, assigned selected junior officers of tactical aptitude and expertise to his staff. Trained as command observers and recognizing the increased complexity of warfare, Frederick called upon these officers to assist in the control of line troops in addition to assisting other staff officers in coordinating more specialized functions (administration, supply, etc.).⁴ Although Frederick still exercised direct command his system may be considered an early forerunner of the Prussian general staff liaison system of a century later.

The proliferation of firearms during this period also caused a revolution in tactics as well as command. The scope of battle expanded with a corresponding increase in chaos. The fog of war, now surrounded in gunsmoke, became even more dense. Combat formations could no longer be effectively controlled by a single man. Consequently, aides-de-camp made their first formal appearance in the role of command observer and messenger. Aides were an additional means commanders used to exercise control over battles. They literally became the "eyes, ears and voice" of the commanders. Aides-de-camp became the primary means of obtaining vital information required by field commanders to maintain effective command and control over their rapidly growing, increasingly widespread, and decentralized forces.

Virtually every major commander of the Napoleonic period used aides in the same manner. However, many historians consider the use of aides de camp by the Duke of Marlborough at Blenheim in 1704 as the best example of a commander's employment of them in a liaison role prior to Napoleon. Positioning himself at the center of his army the Duke used aides extensively to communicate orders to his flanks. Once the battle had commenced young aides provided him updated information as he moved about the battlefield. The effectiveness of this arrangement allowed the Duke of Marlborough to position himself at the most critical point of his line. Thus when an opportunity developed to deliver a decisive blow he was invariably at the point of greatest importance and readily available to influence the action.

The Duke's aides were personable, above average junior officers, able to judge the terrain as well as the tactical situation. In the words of one famous military theorist of the era, F. W. Von Zanthier, they clearly "understood how important it is to transmit an order exactly, correctly estimate the situation, and be sufficiently enterprising to ensure a

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decisive opportunity did not pass by."⁵ The ability of these officers to assist in accurately conveying the commander's intent to subordinates, coupled with their duties as reliable observers is clear. They were the earliest pattern of the aide-de-camp/liaison systems of Napoleon, Wellington, and well over a century later, Field Marshal B. H. Montgomery.

The Napoleonic era brought about wholesale changes in strategy and tactics and probably the greatest revolution ever in the art of command. Napoleon's command structure incorporated the first fully comprehensive staff organization and his use of both high and low ranking aides as a means of assisting him in the control of the Grand Armée is well documented. Napoleon, perhaps more than any other commander prior to him, emphasized the absolute necessity of having available at all times information critical to the conduct of operations. The Emperor knew full well the value of personal observation, and used his aides extensively to gather information and to convey orders to his subordinate commanders. Napoleon's aides were not simply limited to gathering tactical and operational information, however, they supplied strategic information as well.

As with every commander, Napoleon relied heavily on the routine reports of his commanders and staff. Nevertheless, he often found them lacking in detail, thus not fully useful. Unit reports also frequently missed the mark in expressing the more intangible aspects of unit status like leadership, morale, and esprit. If subordinate commands did address these vital areas they were often less than objective, if not totally biased. To keep him informed on these significant conditions within his various commands, and to verify his subordinates' reports Napoleon used his aides as a "Directed Telescope" to augment the regular reporting system. Napoleon viewed the formal system as totally inadequate when reporting what Van Créveld refers to as "less structured information." The Emperor General also turned his telescope toward the enemy on occasion, and upon the terrain on which campaigns were to be fought. It was Napoleon's use of aides, coupled with his system of formal reporting procedures, that contributed to his leadership techniques becoming a wholesale revolution in military command technique.

Napoleon used a dual system for cutting through established command channels to gather time sensitive information—his formal staff, and his aides and liaison officers (a group of six to thirteen lesser grade officers). The Emperor's general grade aides-de-camp, his lower ranking liaison officers, and his commissioned orderlies were for the most part young, active and in the "full flower of their mental and physical power." Their duties were both broad and diverse ranging from carrying battlefield messages to reconnoitering entire countries and negotiating surrender terms. Aides were also periodically called upon to accomplish strategic missions such as bearing important diplomatic messages to foreign heads of state. Napoleon's aides-de-camp, as a result of their sensitive duties, had to possess "savoir faire," and an ability to get along with, and be trusted by, subordinate commanders and staff officers of higher rank. They had to be well trained, professional soldiers, precise in their observations, able

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to isolate problems, and perhaps most of all, capable of discriminating between what tactical information was vital and what was not. The aides also had to master the operational philosophy of their emperor, fully understand his intent and be able to provide answers to any questions asked of them by subordinate commanders. Napoleon's aides often spoke in the name of the emperor and as a result were respected as possessing his utmost confidence. An example of the type of mission Napoleon's aides were called upon to perform are the instructions given to General Bertrand.⁶

Tomorrow at dawn you depart and travel to Wormer . . . make sure all preparations for crossing the river by my guard are being made. You will then go on to Kassel to make sure the place is being put in a state of defensive and provisioned. Taking due security precaution, you will visit the fortress of Hanau. Can it be occupied by a coup de main?⁷

Another example of an aide's orders, in the context of verifying the accuracy of a subordinate's report, is a mission given to Lebrun.

You will first visit the Corps of the Duke of Regis and inform me about his person. You will copy me a picture of his entire Corps. You will report on the state of his infantry, artillery, trains, magazines and hospitals also the rumors circulating in and around the corps, in brief anything that might interest me.⁸

Although younger officers were sent on more limited missions, the objectives to be accomplished were virtually the same; the collection of specific information on the fighting condition of the Grand Armée, gathering intelligence and assisting in the control of forces in battle. Napoleon's younger, lower ranking aides-de-camp were hand-picked, often coming from noble families with a military tradition. Two years troop service was the only basic prerequisite for selection. Beyond that, however, they had to be loyal, dedicated officers, both mentally alert and physically fit.

Napoleon's aide and liaison officer system was the model for several similar arrangements of the modern era and they played an instrumental role in the command and control of the best organized army that history had seen until then. His "Directed Telescope" enabled him, as the commander of the Grande Armée, to circumvent the command hierarchy as needed. The use of aides-de-camp gave him the means to focus on any one part of his army and obtain the specific, sometimes intangible and often vital information required for successful operations.

Taking note of the effectiveness of Napoleon's use of aides, one of his principal adversaries, the Duke of Wellington, employed an analogous system. The common practice within the British Army of the Napoleonic era was that each general officer was allowed at least one aide-de-camp. Lieutenant generals were permitted two. A Commander of Forces was allotted

as many as he felt was required. During the Peninsula Campaign Wellington, as a result of his high command position, had six aides-de-camp ranging from lieutenant to lieutenant colonel.⁹ The relationship between the famous British commander and his aides was so close that he once stated that even in retirement he must have his young aides at his side. Wellington's subordinates performed the same basic roles as those of Napoleon but were of special use in gathering intelligence. Perhaps of even greater importance, however, his aides, like those of Napoleon, helped compile information on the condition of his own forces.¹⁰

The example set by Napoleon, and less so by Wellington, was followed by armies throughout the world during the remainder of the nineteenth century. The large armies of the American Civil War proved no exception. Often considered the last great war of the Napoleonic era, and the first of the modern one, the use of aides in a liaison role during the Civil War by several famous commanders, both Union and Confederate, provides an excellent example of an early American version of a "Directed Telescope."

The Modern Era--The American Civil War

Several famous Union and Confederate commanders differed significantly in their approach to command procedures. Generals Ulysses S. Grant and William Tecumseh Sherman both made extensive use of young aides in a "Directed Telescope" role during their many campaigns. Like many other Civil War commanders, Grant and Sherman used their aides primarily to assist in the command and control of their forces, perform sensitive missions and gather critical information on enemy as well as friendly forces. On the other hand, many leading Confederate generals failed to use them to their full effect, limiting them strictly to a commissioned courier role.* Their failure to use any truly effective command and staff liaison system whatsoever often frustrated their greatest military leader, General Robert E. Lee. Eventually, as a result of numerous command and staff failures, attributable mainly to the lack of an effective means of obtaining valuable tactical information and undisciplined conduct on the part of many of his subordinate generals, Lee called for the creation of a corps of officers within the Confederate army to perform duties strikingly familiar to a general staff "Directed Telescope" system.

As a brigadier general early in the war, Grant had two captains as aides-de-camp. One of them, John A. Rawlins, would rise to general officer rank and later act as Grant's chief of staff and serve briefly as Grant's secretary of war when the general became president. The number and rank of Grant's aides-de-camp increased with the General's rank. Eventually as a lieutenant general he had four lieutenant colonels as aides-de-camp (out of

*There are at least two exceptions, Longstreet's Sorrels and Forrest's "Gallopers."

a staff of only fourteen). Lieutenant colonels Comstock, Porter, Babcock and Dent were all known for their good judgment, great personal courage, professional competence, and ability to communicate effectively with others.¹¹ They all had abundant field experience, were young, active and fully prepared to perform any duty called for by their chief. They acted as Grant's "eyes" on countless occasions throughout the war and they played a key role in many of the famous general's victories.

Prior to a battle Grant would express his overall intent to his aides. He would explain to them how he saw the battle progressing. He would also express to them his plan of maneuver and stress the critical importance of overcoming any delays whatsoever in the communication of his orders. Grant clearly stated what he expected from his close circle of young staff officers. On the eve of the battle of Petersburg, Grant provided the following instructions to his assembled aides:¹²

I want you to discuss with me freely from time to time the details of the orders given for the conduct of a battle, and learn my views as fully as possible as to what course should be pursued on all contingencies which may arise. I expect to send you to the critical points of the line to keep me promptly advised of what is taking place, and in cases of great emergency, when new dispositions have to be made on the instant, or it becomes suddenly necessary to reinforce one command by sending to it troops from another, and there is not time to communicate with headquarters, I want you to explain my views to commanders, and urge immediate action, looking to cooperation without specific orders from me.

The trust Grant had in his young aides-de-camp is as obvious as the heavy weight of their responsibilities.

The relationship between these officers and the army commander, as with Wellington and his aides, was clearly a close one. This strong personal relationship between commander and subordinate, one based on mutual respect, was a trend that would become a prime characteristic of many successful "Directed Telescope" systems in the future. Grant's aides dined with the general nightly in an informal, almost family-like environment. The routine evening discussions, often driven by the events of the day, provided the commanding general key insights into the status of his army. As with Napoleon, Grant's aides often provided information the general was unable to gather through the more conventional formal reports sent up the chain of command. Their observations gave Grant an accurate impression of the morale and esprit of his soldiers as well as their overall readiness to engage the enemy.

Grant's aides also performed the more traditional aide-de-camp role, conveying orders in combat. As it was the practice of the general to position himself centrally (so he could be found and could issue his orders rapidly), his four aides-de-camp were important in maintaining effective command and control with the often widespread units of the army in the field. Grant's use of his aides, like that of the Duke of Marlborough over 150 years earlier, enabled him to be at the critical point in the line when his presence was most needed and on occasion proved decisive to the outcome of the battle.

Another famous Union General, W. T. Sherman admired the reduced, streamlined effectiveness of Grant's staff. He closely modeled his own small staff after it, especially in regard to his aides-de-camp, and how best to use them. As a division commander Sherman had two aides, both lieutenants. He used these officers to the fullest extent in gathering information, making observations, verifying reports and conveying orders. As with Grant's aides, the two lieutenants rose in rank along with their commander. Even as commander of the Military Division of the Mississippi, however, Sherman maintained a reduced staff when he was in the field. In fact, Sherman relied heavily upon three captains as primary aides during his Atlanta campaign.¹³ The effectiveness of Sherman's small field staff's information gathering system, and perhaps a hint of the general's overall philosophy of command, is reflected in his requiring only a single report from his subordinate commands during his hard driving campaigns, . . . a trimonthly strength report.¹⁴

Sherman gave credit to the benefits of technology in improving command and control, especially the telegraph. He later, however, stated that usually the best system for every purpose was paper, pencils, and a good aide. He also proposed that military headquarters, from brigade to army, should include among the staff "a couple of young aides-de-camp, habitually selected from the subalterns of the brigade, who should be good riders, and intelligent enough to give and explain the orders of their general."¹⁵ The success of Sherman's campaigns, like those of Grant, attest to the effectiveness of their almost identical "Directed Telescope" aide/liaison systems. Many federal generals did not use their aides as effectively. As a result they often paid the consequences, stumbling into battles without adequate intelligence and lacking an effective means of controlling their forces once engaged.

Although Robert E. Lee used his own staff and his aides efficiently, especially Colonels Charles Venables, Walter Taylor, Charles Marshall and Randolph Falcott, many other Confederate commanders did not.¹⁶ Their overall performance as operational commanders often suffered accordingly. In selecting officers for his own staff, Lee gave primary consideration to individual personality more than professional attributes. As with other commanders of the period, his staff was composed of junior officers, often much younger than himself. Furthermore, Lee insisted that his staff officers' personalities blend with the overall tone of his headquarters and his unique style of decentralized command and control. Despite his

overemphasis on personality, Lee was an excellent judge of professionalism and individual character for all of his aides, like those of his Union counterparts, were known for their coolness under fire, tact and judgment.

Lee recognized that the Confederacy's severe shortage of experienced "Old Army" staff officers at virtually every level of headquarters prohibited centralized control of tactical operations in the Confederate Army. As a result, he was forced to assume that his armies would function in concert with one another without it. He did not find a staff model adequate to serve the rapidly changing needs of technology so he relied heavily upon simple mission oriented orders. One biographer, Clifford Dowdy, went as far as to say that nothing was required of Lee's subordinate commanders beyond the most rudimentary and fundamental techniques of command. Lee simply saw no need for a "Directed Telescope" early in the war. He assumed that between the simplicity of his orders, the skilled leadership of his subordinates and their renowned fighting spirit, they would operate well within his orders and support his overall intent in the case of his absence on the battlefield. Lee did not feel it necessary to investigate what was happening in his subordinate commands, let alone verify reports and closely scrutinize the conduct of their operations. After several Confederate tactical setbacks, however, he painfully recognized the need for some type of means to increase the overall effectiveness of his rather loose command and control system and to establish firm control over the undisciplined actions of many of his subordinate commanders. After the Seven Days' Battles he realized that he had no way of knowing just how his division commanders were operating in relation to the general headquarters when in combat.¹⁷

Lee recognized the shortcomings of his army's staff system early in the war. The failure of his staffs to provide correct and timely information was readily apparent. The weaknesses inherent in the "patronage" practice of appointing relatives, political associates, or old friends to key staff positions, instead of officers with more professional credentials, resulted in exacerbating already dysfunctional command and control system conditions.* In March 1863 Lee called for the establishment of a separate corps of officers to fill critical positions within the Army and correct the chronic "information vacuum" problem. He wrote to President Jefferson Davis:¹⁸

The greatest difficulty I find is in causing orders and regulations to be obeyed. We therefore have need of a corps of officers to teach others their duty, see to the observance of orders, and to the regularity and precision of all movements . . .

*Not uncommon in most armies of the period but the rule more than the exception in both the Confederate Army and in Union militia units.

In reference to aides and other staff officers Lee stated in the same correspondence:

If you can fill these positions with proper officers--not relations and social friends of the commanders, who, however agreeable their company, are not the most useful--you might hope to have the finest army in the world.

It is obvious that Lee saw the need of some type of "Directed Telescope" system. However, the suggestion by the famous Southern general for a separate corps of officers, trained staff officers and observers, is somewhat unique. Was Lee suggesting the formation of a Confederate General Staff Corps?

The Modern Era - World War I

The American Civil War marked the end of one era of military history and the beginning of another. The art of war was clearly in a state of flux during this period. Large conscripted armies with expanded and more specialized staffs came into vogue. Consequently, by the end of the nineteenth century aide-de-camp duties had changed drastically. The aide's traditional responsibilities were being redefined by both staff reorganization and the rapid pace of communications and military technology. The formation of a General Staff in many leading armies around the world resulted in the battlefield functions of aides-de-camp being passed to either operations, intelligence or liaison offices.

New weapons and larger armies also called for tactics to become further decentralized. Strategic movements now firmly tied to railroads allowed strategic/operational concentration of forces close to the battlefield. Although the telegraph and railroad enhanced centralizing command and control, the growth in size of armies and new weaponry had the opposite effect, spreading armies further apart. The telegraph made instantaneous communication possible, but it was also extremely insecure, unreliable, and vulnerable. In the long run, its importance to field commanders proved negligible, for even though the telegraph proved instrumental in exercising effective command and control at army level, it was seldom utilized at corps and division. It was simply an impractical front line communications system. It was proven during these early days of the modern era that, despite advances in staff organization and technology, commanders still found themselves largely reliant upon staff officers on horseback to monitor the activities of subordinate commands. The "Directed Telescope" may have been modernized and redesigned in theory, but in practice it remained the same. The central European wars of Prussia against Austria and France in the late nineteenth century again showed the utility of the system despite the advances of technology and the creation of formidable general staff, systems on behalf of the Prussian, Austrian and French military establishments.

It was during this period that General Helmuth von Moltke, creator of the first truly modern staff system, found himself dependent, like so many commanders of the past, on an aide type liaison system for battlefield information. Within the staff of each Prussian field army Moltke assigned trusted subordinates, general staff officers, who, like aides of the past, were tasked to supplement the units' official reports with private correspondence. Moltke's officers roamed the battlefield and observed key events as they occurred. They carried important messages and often served as the commander's most effective means of gathering critical information. Assigned to frontline units, his young officers were able to gain details on battles that went beyond the commander's view. As with their aides-de-camp forerunners, they compiled information not included in standard telegraphic reports, freely reporting the "intangibles" of combat and "bottlenecks" to efficiency. Unlike many of their predecessors, however, these officers had a great deal of authority. Carefully selected and trained, they were military experts and analytical observers. These professional attributes made the quality of the late nineteenth century Prussian "Directed Telescope" extraordinary. Although the Prussian system was not without fault, it proved to be an extremely consistent, trustworthy and reliable means of keeping high level commanders informed as to the conditions on the front.

As the all too brief phase of World War I maneuver deteriorated into static trench warfare, a proliferation of headquarters quickly arose behind the front lines. Housed in comfortable, semi-permanent or permanent facilities, and interconnected by a vast complex of telecommunications systems (telegraph, field telephone and wireless), these headquarters soon assumed total control of the war. As a result of their relative "isolation", high-level commanders quickly lost touch with the harsh realities of the front. Major General J. F. C. Fuller described command conditions during this period in his post-war work Generalship, Its Diseases and Their Cure as follows:¹⁹

As the general became more and more bound to his office, and, consequently divorced from his men, he relied for contact not upon the personal factor, but upon the mechanical telegraph and telephone. They could establish contact, but they could accomplish this only by dragging subordinate commanders out of the firing line, or more often persuading them not to go into it, so that they might be at the beck and call of their superiors. In the World War nothing was more dreadful to witness than a chain of men starting with a battalion commander and ending with an army commander sitting in telephone boxes, improvised or actual, talking, talking, in place of leading, leading, leading.

Conditions were ripe for headquarters to succumb to the temptations of overcentralizing their tactical operations. It was only natural that operational flexibility was sacrificed in favor of disciplined control. For the British Army it was limited to the degree in which command could be exercised by wire. British liaison officers simply relayed information or sat idly by representing their headquarters "interests." This British overreliance on telephone, telegraph, and later wireless, combined with their ineffective use of liaison, severely reduced their flexibility. Consequently, the operational minds of many leading staff officers and commanders turned inward. Initiative suffered and "thinking" in the rear headquarters ultimately became as stagnant as the trenchline defenses of the front. Lacking a truly effective "Directed Telescope" system, a general headquarters was solely reliant upon telegraphic or telephonic description and appraisals from the front. The only tactical information available originated from divisional headquarters, which were themselves too far from their units in contact to have an accurate appreciation of true combat conditions. This overreliance on technology led to many high level commanders failing to clearly "see the battlefield" and contributed directly to one disaster after another, the crucial Battle of Somme being one of the best examples.

In that battle one communications system after another failed to provide an accurate appraisal of conditions. Decision makers were in the dark. Without a "Directed Telescope" General Sir Douglas Haig, British Commander at the Somme, stubbornly stuck to his plan, totally ignorant of what was occurring on the battlefield. Carrying out the orders of a general headquarters out of touch with reality, wave after wave of British infantry were thrown into the line by intermediate commands. When it was over almost 60,000 men had been lost in a single days' fighting. The means for conveying conditions on the battlefield were so poor that it would be days before the magnitude of the Somme defeat would be realized.

Similar incidents occurred in other battles, including Passchendale Ridge, where the Chief of Staff of the British Armies in Europe remarked after the battle, "Do you mean to tell me that the soldiers had to fight under such conditions? Why was I never told about this before."²⁰ A young British staff officer, Major Bernard L. Montgomery, overheard the Chief's remarks and vowed that if ever he were placed in high command he would never be put into such a position of absolute ignorance about frontline conditions. Montgomery would develop a "Directed Telescope" liaison system second to none a generation later during the next world war.

The German Army's experience in the 1870's war with France taught them a number of staff lessons that the British belatedly learned in World War I. The Germans found themselves resorting to their proven general staff liaison system again in the great war. The system worked extremely well. General staff officers of higher headquarters were sent out weekly to visit the front line. Each was assigned a specific section and given a questionnaire requiring them to evaluate the state of morale, supply, fortifications and conditions in general. During battles, these officers

were sent out to gain a direct impression of the fighting. This system gave the Germans a backup to the more technical means of gathering information. After a period of time, staff officers developed a personal relationship with the commanders of the segment of the front which they were responsible for observing. Eventually these general staff officer observers were not considered outsiders and, as a result, were able to obtain even more critical and candid information. Unlike the British, the Germans recognized early in the war that their type of liaison, the one originally developed by Moltke some fifty years earlier, enabled commanders to make timely decisions based upon actual combat conditions, not ones driven by a conditioned response to a formalized plan.

Seeking a more balanced approach, the French, like their British allies, were determined to maintain centralized control. The commander of the French armies, Field Marshal Joseph Joffre realized that while telephones, telegraphs, and wireless would enable him to receive information and transmit orders, an improved means of maintaining close command supervision had to be developed. As a result Joffre created his famous "vertical liaison" system.

Joffre's liaison officers, a group of young officers, mostly captains and majors, were carefully selected and attached to the operations section of subordinate headquarters. Their duties were to inspect units, carry instructions and verify the execution of missions assigned by the general headquarters. Upon returning from their tours of duty the officers would report directly to the commander. Once again, as with previous systems, it was discovered that the greatest value of the system was reporting the intangible information that never reached headquarters through routine reporting channels. Like the German system, however, there were problems with command relationships due to the excessive authority given some of Joffre's liaison officers (many commanders were relieved due to adverse reports by liaison officers). In that regard the system was not entirely successful. Nevertheless, despite occasional abuses of authority the French vertical liaison system served its primary purpose by promoting an understanding of orders up and down the chain of command.²¹

Observing French and German successes, as well as British failures in exercising command and control, at least one American officer developed his own somewhat unique system. Colonel George C. Marshall, then Chief of Operations of the AEF's First Army, assembled a group of young army officers, captains and lieutenants to act as combat observers. Marshall instructed them on the information they would obtain from the divisions to which they were to report. Accompanying division assault formations, each officer carried six courier pigeons. They were directed to release the birds at 0700 hours, 0900 hours and 1500 hours. For the most part the officers were charged with providing a front line trace accompanied by a brief description of the status of the fighting.²² Marshall stated that the information provided by these officers, a form of American World War I "Directed Telescope," proved invaluable.

World War I lessons in command and control were numerous. Command liaison remained a viable staff principle despite technological advances. Nevertheless, lacking any truly effective liaison system the British perhaps learned their bitter lesson better than any one, for as Fuller concluded after the war.²³

Formerly there was a general's staff. This was composed of aides-de-camps, not spruce, young officers who do flunkey work, but experienced men who delivered the general's orders and saw that they were carried out. Though this system of contact and control is just as valuable today as it was in the days of Napoleon, it has fallen into abeyance; for the present day liaison officer is far removed from the old-fashioned aides-de-camp.

The Interwar Years

The history of World War I abounds with stories of effective and ineffective command and control systems. Various combat information systems were utilized by virtually every belligerent and were usually patterned along the lines of a formal command and staff liaison network. Fortunately, the many painful lessons learned in command and control techniques during the war were not lost in postwar military education. Interwar year field service regulations, field manuals, professional journals and other professional literature reflect the absolute necessity of developing "Directed Telescope" type liaison systems for modern war.

Answering Fuller's call for a "system of contact and control" and studying their many command failures during the Great War, postwar British field service regulations stressed that "during battle all commanders in their degree must keep in close and constant touch with the fighting troops."²⁴ The same regulation cites that a commander's greatest challenge in modern war is to develop an accurate idea of the actual battlefield situation. Once again Van Creveld's axiom about the quest of war being a search for certainty is recognized. The British regulation called upon liaison officers to keep their commanders informed of all combat conditions. Liaison duties in the British Army were greatly expanded and were described as follows:²⁵

The duties of liaison officers are to provide a closer touch between the headquarters concerned than is possible by other means; to convey the higher commander's orders, and, when necessary, forecasts of his intentions, to his subordinate commanders; to bring information of the situation in the forward area to the higher commander at frequent intervals, generally at the end of definite phases of an operation.

French liaison doctrine was also refined shortly after World War I. A high level military board, headed by Marshal Petain, studied means of improving the command and control of large formations. The French Army's

Provisional Instructions for the Tactical Employment of Large Units, published in 1924, was the end product of the Board's research. The regulation, translated into English for instructional use at Fort Leavenworth, vividly described the necessity of a type "Directed Telescope" system. Explaining the functions and characteristics of the French General Staff as an auxiliary of command, the manual clearly outlines the necessity of general staff liaison officers possessing "superior qualities of general and professional knowledge, of tact, of devotion and of abnegation."²⁶ The absolute necessity of commanders being in constant touch with subordinate commands, so as to fully understand the actual combat conditions, the status of soldiers and equipment, and the progress of battle were seen as paramount. The regulation also called for general staff officers being sent on a frequent basis to subordinate commands to either verify combat conditions or clear up situations. The Board emphasized that without effective liaison a major command will be unable to "animate the execution of its orders and to coordinate the efforts of all into a single, powerful and continuous force."²⁷

Somewhat surprisingly, the most in-depth descriptions of the duties and responsibilities of liaison officers, in a "Directed Telescope," role, can be found in the United States Army's Command and Staff Principles, a 1937 text at the Command and General Staff College, and the pre-World War II FM 101-5 Staff Officers Field Manual. As with the foreign manuals, American doctrine defined liaison as a principal means of commanders keeping in touch with the tactical situations. The small 1937 textbook, however, stresses the importance of the system throughout modern military history and fully describes what is required to make it work to its full effect. Accordingly, two purposes for liaison officers are identified in Command and Staff Principles. First, the liaison officer's primary duty is explained. According to the manual, the liaison officer's most important mission is to keep the commander up-to-date on the situation within subordinate units. He is tasked with providing elements of information not available in routine reports, information that may ultimately prove critical in the commander's decision-making process. Second, the liaison officer is required to fully dedicate himself to facilitating communications at all levels in order to accomplish a "concerted effort."

In discussing the necessity of liaison as a means of obtaining critical information and enhancing overall command and control, the Leavenworth publication emphasizes the point made by Napoleon over a century before that routine reports are often qualitatively neglected and careless in preparation due to either forgetfulness, stress, or simply communication problems. In appraising the professional, and for that matter, personal attributes of a good liaison officer, Command and Staff Principles states that they should possess the following seven traits in order to be successful:²⁸

- (1) good judgment
- (2) unfailing tact
- (3) initiative

- (4) sympathy, which implies a desire to help rather than to criticize
- (5) acute perception, coupled with exactness and accuracy in determining facts
- (6) ability to express himself and deliver impartial reports in the clearest and most concise terms
- (7) good tactical knowledge

The World War I "lessons learned," and the resultant liaison doctrine that emerged during the interwar years, provided the foundations for the many "Directed Telescope" systems that followed in a second great war. Interwar command and staff liaison doctrine was not entirely discarded with the advent of a second world war. Liaison systems were used by many famous Allied and Axis field commanders, among them Montgomery, Patton, Rommel and Von Manteuffel. In an attempt to hastily update and refine World War I based interwar liaison doctrine, so it could support the new dynamic nature of highly mobile "blitzkrieg" warfare, uniquely different systems began to emerge. In principle, however, they remained remarkably similar. They shared several key characteristics with one another as well as with the many systems of the past. However, for a number of reasons, new technology and tactics being the greatest, redefined "Directed Telescopes" developed either a distinctly technical/tactical or staff character.

World War II

The art of war experienced yet another technological revolution in the period immediately prior to and at the beginning of World War II. Consequently, commanders and military theorists alike sought means to overcome the challenges presented by the new highly mobile type warfare. The new tactics and technology obviously demanded increased decentralization. Complete decentralization, however, would risk battlefield chaos. In order to offset the decentralization trend, effective "state of the art" means of enhancing command and control were eagerly sought. As in previous conflicts operational experience early in the war emphasized the necessity of obtaining information on actual combat conditions outside of normal command channels. In order to meet this requirement, modernized, yet traditional, versions of "Directed Telescope" systems were instituted by most major armies during the conduct of the war. The Wehrmacht's staff information service, the Soviet's STAVKA "flying circus" observers, American Signal Intelligence and Monitoring (SIAM) units and the British PHANTOM service all had similar missions although they differed somewhat in the means they set out to accomplish them. Regardless, early wartime Axis and Allied professional literature emphasized liaison as an important means of enhancing overall command and control in mobile warfare and liaison was a primary responsibility of all of these units.

The effectiveness of liaison, however, was entirely dependent on the commander's support of the system. All World War II armies had liaison officers, some used them poorly, others quite well. When used properly they contributed to the highly successful command and control systems employed by

several famous field commanders. The many liaison systems described in the interwar doctrine of the different armies were functional in basic design and theory, but often suffered in application in the field due to lack of command support, especially when relatively incompetent officers, poorly trained and not suited for liaison duties, were assigned to them. On the other hand, many successful "liaison-minded" commanders appointed highly qualified young officers to perform the "Directed Telescope" duties. Rommel's lieutenants, Manteuffel's "Cowboys," Patton's Third Army staff and liaison officers and perhaps most of all Montgomery's 21st Army Group liaison officers are key examples of truly successful systems.

It was also discovered early in the war that development of the radio as the prime means of controlling and coordinating activities of front line units enhanced the overall effectiveness of liaison as a means of command and control. Long range radios were used extensively by liaison patrols to report tactical conditions directly to general headquarters. The British Army's PHANTOM service and the U.S. Army's SIAM (Signal Information and Monitoring) companies were two such units designed to supplement normal channels of communication in providing information directly to general headquarters in a more timely fashion and in greater detail. Both units employed command liaison officers in mobile patrols. Their general responsibilities were strikingly similar to those of their aides-de-camp and general staff liaison officers predecessors.

PHANTOM

PHANTOM originated in 1939 as the General Headquarters Liaison Regiment and was employed in Belgium-France in 1939-40. Bypassing normal reporting channels PHANTOM patrols sent information directly to corps and army headquarters. Information was also acquired by intercepting friendly radio traffic on unit command nets (a separate signals component originally known as the "J" service, "J" intercept sections were combined with PHANTOM patrols in 1944).

The primary mission of PHANTOM, much like the "Directed Telescopes" of the past, was to provide army and intermediate headquarters with the most accurate, confirmed and timely front line information available. This was accomplished by posting patrols at all major subordinate levels of command. Consequently, unlike systems of the past, PHANTOM was able to produce identical and simultaneous information at division and corps level. Information was passed laterally to adjacent commands in the same manner. PHANTOM patrols carried out their mission by working at either the division headquarters or one of the division's forward units. Obtaining information from the most reliable source available, the patrol would transmit the information in cipher to PHANTOM squadron headquarters usually collocated with army headquarters. If deemed necessary the information was sent to PHANTOM regimental headquarters at army group. Once deciphered and verified, it was passed directly to the operations branch of the army headquarters. Concurrent with its transmission to squadron the PHANTOM detachment at the corps headquarters of the division where the message

initially originated would monitor the coded information, decipher it and provide it to the Corps Commander. The same message, monitored by PHANTOM detachments of the remaining divisions in the corps, was provided to their commanders accordingly. The system proved to be extremely effective. One World War II after action report on the activities of PHANTOM detachments in the American sector during Operation OVERLORD stated that information was usually "cleared" within a half hour of the time of the event. Nevertheless, there were some "customary" problems with the system . . . PHANTOM liaison officers were sometimes looked upon as "spies" from higher headquarters.

As with similar systems in the past, especially those employing general staff officers, PHANTOM liaison officers were looked upon with suspicion by many subordinate commanders and staff officers. Their presence was often unwelcomed. The reaction of one high-level American commander to the arrival of his British PHANTOM liaison officer at Normandy was "What the hell are you doing here?" or words to that effect.²⁹ Even though PHANTOM officers had virtually no authority, especially when compared to their general staff officer predecessors in the German and French armies of a generation earlier, they had to explain their presence time and time again to their host commander. In order to dispel the false image of the PHANTOM command liaison officer usurping command authority or "snooping," strict rules were established concerning the conduct of the officers and the means in which the information they obtained was controlled. For example, PHANTOM officers were required to transmit facts, not their own conclusions, and every message had to cite the source of the information (usually a staff officer or commander of the unit being supported). A typical PHANTOM message, transmitted from an American unit, took the following format.³⁰

PHANTOM Msg No 7 130630

XV US Corps

SOURCE MAJ G-3, 5 ARMD Div, No Change in Forward

Positions up to 0630 hrs CCB Concentrated Area

Q4630-5630

Aug 13, 1944
Third US Army

TS0120952

The problem of overcoming the higher headquarters inspector image was also dealt with through the close screening of officers selected to serve as PHANTOM liaison officers. The liaison officers were generally junior to the officers with whom they had to work with, so they compensated for the disparity in rank and experience with personality, poise, tact, and energy. Simply stated they had to "sell themselves" in order to be successful. Among other important criteria for selection was their possessing a good operational background, physical and mental stamina and perhaps most of all, initiative. Nevertheless, as the war progressed and PHANTOM proved itself as the only reliable source of information on many occasions, most Allied commanders became sold on the system and problems with "relationships"

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between PHANTOM patrols and supported units decreased greatly. Eventually PHANTOM became fully accepted at lower headquarters, and often viewed as a vital source of information, a "directed telescope" for both the higher, lower, and intermediate commanders.

The mission of PHANTOM also changed considerably toward the end of the war. The information they were told to obtain became more specific and more battlefield intelligence versus command information oriented. For example, the Canadian First Army gave the following orders to its PHANTOM detachment:³¹

1. POS: General information on progress down to battalion level. Intentions--change of plans.
2. INT: Identifications and reidentifications adnauseum, gossip of the enemy
3. AIR: Line for forward troops, or estimate DITTO by any and every means
4. RE: Constant bridge information
5. RAF: INT: Information of enemy air
6. SD: Headquarters or own troops down to battalions
7. AQ: Road surface or traffic news.

In order to obtain the type of information being requested by GHQ intermediate and subordinate headquarters, PHANTOM liaison patrols often found themselves behind enemy lines. At one period a PHANTOM patrol was operating between the battalions of a German regiment. PHANTOM patrols were also the first units to make contact when the Allied pincers closed around the Falaise pocket. As a result, the British XXX Corps and U.S. VII Corps Commanders were aware of the juncture before the lead division commanders knew about it.³²

The intelligence and command and control value of PHANTOM was clearly obvious. Routine channels of communication once again proved inadequate. Staff officers, even though instructed to keep higher headquarters informed, found themselves so overwhelmed by their other responsibilities that they were unable to pay full attention to sending information. The many fluid combat situations of the war, conditions that doctrinal communications systems such as wire could not adequately support, made PHANTOM an absolute necessity at times. PHANTOM and the "J" service deeply impressed the few American commanders exposed to it early in the war during the closing months of the North African Campaign. Combined Operations Headquarters, August 1943 Monthly Information Summary outlined the value of the system to all Allied commanders as follows:³³

A. PHANTOM is a regiment solely engaged in obtaining information for the Commander it is ordered to serve. It is not a special signals unit.

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B. The patrols "J" Sections can be directed to any part of the battle from which the Commander required more detailed and more speedy information than he can obtain by normal channels.

C. Though normally serving G(Ops), G(Int), and Air, the regiment has also frequently been of assistance to Staff and Services.

D. The organization is flexible so that it can fit into any force.

E. By the wide deployment of the regiment, and by the use of the W/T sets provided in the officer patrol and in the "J" Section to listen in to W/T nets, the regiment can give valuable information about flanking formations to Commanders at all levels. This is especially useful where the flanking formation is an Allied one.

F. As mentioned above (para 9) the information available is often very detailed. The Commander being served should lay down how much detail he wants to receive.

G. It is evident that when PHANTOM patrol officers are sent to formation HQ they must have access to the Commander or to his principal Staff Officer on whose appreciation of the situation, their reports must be made.

SIGNALS INTELLIGENCE AND MONITORING (SIAM)

Patterned after the British PHANTOM, or more specifically the radio intercept "J" service used extensively by the British Eighth Army during the North African Campaign, American Signal Information and Monitoring (SIAM) units were first organized on a provisional basis by the U.S. Seventh Army in Sicily. Radio monitoring teams of attached division Signal Company Intelligence Platoons were consolidated at Army level and placed under the direct operational supervision of the Army Signal Officer. As with its British counterpart, SIAM proved highly successful in providing frontline information, verifying intelligence gained from other sources, and previewing reports sent through normal command channels.

Impressed by the results of Seventh Army's SIAM detachments, the U.S. Fifth Army organized its own provisional SIAM service prior to the Italian Campaign. Organized in August 1943, along the same line as the Seventh Army units, the Fifth Army SIAM service functioned directly under the Signal Intelligence Section of the Army Signal Office. Attached divisions, however, retained administrative control of the units. To increase the general effectiveness of SIAM units, a liaison service was added by the end of the year in order to supplement intercept information. Similar to PHANTOM's liaison system, SIAM liaison officers would serve

primarily as information gatherers interfacing with division operations and intelligence sections and reporting the information obtained from those sources through the corps to army headquarters.

In July 1944, based upon the recommendations of Fifth Army and SIAM's proven record of success in combat, the War Department authorized the formal activation of a Signal Information and Monitoring Company. Consisting of approximately 350 officers and men, SIAM companies were organized into eight sections; a Headquarter Platoon, Army Platoon, two Corps Platoons and four Division Platoons.³⁴ Drawn from Fifth Army signal assets the newly activated 3151st SIAM Company accompanied the U.S. Seventh Army in the invasion of Southern France and remained with that command until the completion of the war in Europe.

The mission of SIAM was essentially the same as that of PHANTOM. SIAM companies provided the field army, corps and division with timely and accurate tactical information, obtained directly through monitoring the command nets of elements in contact, and with close coordination by liaison officers with principal staff officers of divisions on the line. In addition to its information gathering mission SIAM also provided a means of checking the overall signal security of radio nets operating within the field army. During the peak of operations in January 1945, the 3151st supported a field army of three corps (totalling twelve divisions) while concurrently maintaining effective liaison with the flank corps of adjacent armies.

Army Information Service (AIS)

Another American field army to recognize the value of SIAM was the U.S. Third Army under General Patton. After being informed of the non-availability of a SIAM Company until several months after the Normandy landing, the Army commander converted a Cavalry Group (mechanized) as an expedient measure. The 6th Cavalry Group, consisting of the 6th and 28th Cavalry Squadrons would act as an information gathering service until a SIAM Company could be activated and made available.

The group's mission was to operate a special liaison and monitoring system for the army commander and his staff. A number of means were used to accomplish the mission, liaison officer not being the least.

Similar to SIAM and PHANTOM the 6th Cavalry Group established direct communications with the army command post from front line locations.

However, unlike the other systems the information bypassed intermediate command channels. An intercept system was also organized by the Third Army. Along the same lines as PHANTOM and SIAM, the intercept service monitored battalion, regimental, divisional and corps reconnaissance nets transmitting the intercepted information directly to army headquarters. Of even greater significance to this study, however, was the 6th Cavalry Group's extensive use of command liaison officer patrols.

Led by highly qualified junior officers, the Third Army's liaison patrols would routinely visit command and observation posts of units in contact as well as exchange information with subordinate division G2's and G3's. It should be kept in mind that all of these duties were accomplished by a single squadron with an expanded manning table and additional radio equipment. The second squadron performed the more traditional mission of conducting ground reconnaissance. Third Army's consideration of the speed in which information was passed as the system primary prerequisite to success dictated an absence of no intermediate stages in the passing of essential command and control information from front line liaison patrols to the cavalry group headquarters collocated at the army's advanced command post. The 6th Cavalry under the command of Colonel Edward W. Fickett was known officially as the Third Army Information Service (AIS) but it has also been popularly referred to as Patton's "Household Cavalry." Regardless of its title the group provided an essential service and no doubt played a key role in Third Army's many successes.

Like other "Directed Telescope" units, Third Army's liaison officer patrols shared the problems of the "snooper" image. The fact that the Army was consistently better informed than corps did not help the reputation of the liaison patrols, especially from the division and corps headquarters perspective. Commanders simply did not like the idea of higher level headquarters' observers attached to their units roaming throughout the area of operations gathering information of any and all sorts. The liaison officer was sometimes looked upon as the parochial General Staff Officer or even worse a "Gestapo" agent sent to spy on the commander. Suspicion was usually allayed, however, when G3s recognized that the liaison officer had standing orders not to send messages unless they were first checked and approved by the G3 or a responsible member of the operations section.

It wasn't long, however, before division staffs became reliant upon the Third Army Headquarter's patrols for up-to-date information. In several instances toward the end of the war, divisions requested that patrols be attached to armored formations making deep attacks. Some subordinate commanders accepted the patrols as part of their own staffs and as such, the patrol liaison officer briefed the commander daily along with other staff sections. Although the patrols were designed to serve all levels, they were ultimately responsible to army headquarters. In that regard they provided a steady stream of tactical and operational information to the Third Army Command Post. As one Patton biographer stated, the patrols of the "Household Cavalry were behind Patton's uncanny knowledge of the situation."³⁵

Army Tactical Information Service (ATIS)

As the campaign in Europe progressed, the American army's technically oriented information services (SIAM and the Third Army's AIS) became known collectively as the Army Tactical Information Service (ATIS). A General Board, chaired by General Patton was convened in Europe shortly after the war to prepare a factual analysis of overall ETO operations and the ATIS was

The answer lies in the way he views his ATIS system. Apparently the author did not pick up on this point. Remember Patton bypassed intermediate echelons.

the focus of the Board's study Number 18. Stressing the importance of all information obtained by ATIS being sent directly to higher headquarters after first being coordinated by either the local commander or a senior staff officer, the postwar report emphasized that liaison officers are "servants of the whole command . . . not staff officers expected to interfere with or advise any lower echelon."³⁶ Even though the General Board concluded that an ATIS liaison service is an absolute necessity in modern war, it was decided that the monitoring of friendly nets should be a separate responsibility of existing signal units instead of an ATIS. The Board recommended, with only one dissenting member, (Patton the leading proponent of his own Army's Information Service) that the ATIS become a part of the U.S. Army's standing peacetime establishment. General Eisenhower's closing comments to his input to the Board's findings were that the system was "a highly valuable instrument and one which commanders at all levels will soon learn to appreciate."³⁷ Nevertheless Eisenhower also held a caveat to his praise; he expressed deep concern about the system's chances for abuse stating that "unless it is carefully handled it can become a most objectionable thing, utilizing men and equipment to the detriment of personal relationships between commanders of the several echelons."³⁸

PHANTOM and the ATIS are excellent examples of modern, technically oriented "Directed Telescope" systems designed to meet the information timeless needs of battlefield commanders. As with so many previous wars, routine reporting channels during World War II proved inadequate. Consequently the information challenge, the commanders' timeless quest for certainty was met with the marriage of a modern system, the radio, with traditional doctrine and practice, liaison. An even more classic means of attaining information in World War II, however, was the use of staff officers by General G. S. Patton and personal liaison officers by Field Marshal B. H. Montgomery.

Staff Systems

Patton did not rely solely upon his Third Army Information Service to gather information on combat conditions, but made thorough use of his staff in that capacity as well. Members of the Third Army's staff were required to visit front line units daily, frequently at night, gathering the latest information while at the same time providing encouragement. These staff visits also created a sense of understanding and cohesiveness throughout the command that according to many could not be found within other American field armies. The effective use of his staff in this manner also reduced the number of required reports from subordinate commands. In fact the Third Army had fewer reports than any other field army in the European Theater. In addition to his own staff, commanders and staffs of Third Army's corps and division were also encouraged to conduct daily visits. The flamboyant general, after all, considered 95% of command responsibility the supervision of the execution of orders (while only 5% was dedicated to devising the plan or order itself). Patton's command and staff visits served to directly verify critical orders being carried out correctly. It can be said in the Third Army every staff officer was charged with the traditional aide-de-camp role of command observer.

General Patton's information gathering systems, the AIS, the staff visit and routine reports, combined with his practice of seeing for himself and positioning his headquarters well forward, made him one of the best informed commanders of World War II. Patton's "directed telescope" contributed greatly towards his many successful campaigns in North Africa, Sicily and Central Europe.

Field Marshal Bernard Montgomery, however, perhaps more than any other major World War II Allied commanders, made the best use of liaison officers in their provincial role as a commander's "Directed Telescope." The young liaison officers' personal relationships with their colorful commander was more like that of the traditional aide-de-camp of the Napoleonic era than it was a modern World War II command liaison officer. Stealing a leaf from Wellington's book, Montgomery made extensive use of his close circle of "personal" liaison officers in ways similar to the earlier British commander. Although technology and the art of war had changed drastically over the previous century, the principles and theory behind Montgomery's employment of these young officers remained almost classical. They were his "eyes and ears" as much as were the aides-de-camps of the past. With a combination of ULTRA intelligence, PHANTOM intercepts and transmissions, and the insightful reports of his young liaison officers Montgomery was able to maintain a unique grip on the battle and campaign situations of his 21st Army Group. The General's World War I pledge of never being ignorant of front line conditions was fully met as a high-level commander. His promise, was more fulfilled by his liaison officers than any other separate information system because it provided the information he desired in an accurate and responsive fashion.

Residing with the Field Marshal at the tactical command post the liaison officers were part of a close circle of advisors and confidants, in the same manner of their ancient advisor, aide, and orderly predecessors the "somatophylaxes" and "contubernales." The officers also held a great deal of respect and affection for their commander referring to him often as "Master." Montgomery in turn described them as "the boys." This close almost paternal, personal relationship between Montgomery and his liaison officers, like that of Grant and his aides, enabled them to express their observations and opinions freely. Despite his high regard for his subordinates Montgomery never let his liaison officers' observations go unchallenged. Their observations had to be accurate, comprehensive and concise in order to be accepted. Interrogation by the "Master" was at times grueling as one liaison officer put it.

Often referred to sarcastically as "Montgomery's Walkers" or his "homing pigeons," all of the Montgomery's liaison officers were young combat arms officers, relatively junior in rank (mostly majors). There were usually no more than six to eight of them at any one time and within the group were several American and Canadian Army officers for liaison with the U.S. and Canadian division attached to the British 21st Army Group. All of the liaison officers possessed great strength of character, initiative, independence, and courage. Each of them was hand-picked by the Field

Marshal personally and his standards for selection were extremely high. The young officers were all combat veterans. Many of them had been wounded and most had been decorated for bravery under fire. Their combat experience enabled them to report accurately and objectively on often critical tactical situations. Surprisingly most had no career ambitions either before or after the war. Montgomery's "boys" were outstanding officers in every respect. Often resented, but nonetheless invaluable, they formed a "corps d'elite" within the 21st Army Group Staff.

The liaison officers also had unusual influence and tremendous responsibility. Montgomery tasked them with being able to "break through quicker than signals" and their battlefield reports were often the only basis for vital command decisions. They liaison officers were also often given potentially embarrassing duties, such as asking a division commander why his division was making such slow progress. With such questions they were obviously quite often looked upon with disfavor, especially in units not accustomed to their presence (one American division for example, which Montgomery had the wisdom not to question progress so readily, regardless of his negative reputation as being an insensitive "coalition commander").

Montgomery's young liaison officers were nevertheless his special agents, his acknowledged "eyes and ears" reporting directly to him on a daily basis in a personal and extremely candid manner. They had unrestricted license to travel anywhere within the 21st Army Group area of operation and as stated by several Montgomery biographers were on "nodding terms with senior commanders and the many important politicians who would periodically visit Montgomery's CP." Like so many "observer" systems of the past, and echoing General Eisenhower's postwar apprehensions about an ATIS, Montgomery's system was open to abuse. It's a credit to both the British commander and his liaison officers that there is no evidence of the system being misapplied.

What prevented the system from becoming an army group "spy ring" was, for the most part, the personalities of the selected officers. They were junior officers, modest in the presence of superiors and perhaps most importantly, they did not "gossip." Utterly devoted to Montgomery and the army group as a whole, they would routinely risk death to obtain the information requested. In fact a high percentage of them were killed in action. Their routine exposure to subordinate commanders and staff officers, their professionalism, personality and courage, and the fact that they enjoyed the full support of the army group commander eventually resulted in their presence being fully accepted; if not desired, in many of Montgomery's subordinate headquarters (even in the division CPs of the American First Army).

The simple means in which the system functioned also contributed greatly to its success. After the morning briefing, the liaison teams would travel to the front to obtain information. The overall nature of the information requested can be seen on the list of questions and orders provided by Montgomery on one occasion to Canadian Army liaison officer Major Dick Malone:

Find out the form of the unit, no highlights, exact details.

How far forward are his patrols . . . the real FLT?

What are his Battalion HQs and company CP locations?

What's the real ammunition status along the front line?

Esprit?

How many POWs taken? How many casualties?

What did the commander do today, what's his plan for tomorrow?

Personally see the commander and give him your report.⁴⁰

The best overall description of Montgomery's liaison system was that provided by Winston Churchill in his history The Second World War-Triumph and Tragedy. In Churchill's appraisal, the means in which the system evolved and its value and benefit to modern command can be clearly seen. Striking similarities with system of the past are also revealed.⁴¹

For nearly two hours a succession of young officers, of about the rank of major, presented themselves. Each had come back from a different sector of the front. They were the direct personal representatives of the Commander-in-Chief, and could go anywhere and see anything and ask any questions they liked of any commander, whether at the divisional headquarters or with the forward troops. As in turn they made their reports and were searchingly questioned by their chief the whole story of the day's battle was unfolded. This gave Monty a complete account of what had happened by highly competent men whom he knew well and whose eyes he trusted. It afforded an invaluable cross-check to the reports from all the various headquarters and from the commanders. "I thought the system admirable, and indeed the only way in which a modern Commander-in-Chief could see as well as read what was going on in every part of the front."

Field Marshall Montgomery looked upon his liaison system as being absolutely invaluable. Time and again in his memoirs as well in his numerous biographies, his almost classic "Directed Telescope" system is cited as playing an instrumental role in the successful command and control of the Twenty-First Army Group. Through his own eyes, and those of his trusted liaison officers, Field Marshal Montgomery was credited with never losing a firm grip on the tactical situation or the "hearts and minds" of his soldiers. His use of his young personable and courageous liaison officers was one of his personal leadership characteristics, yet an historically proven and entirely traditional element of effective command.

The Modern Era-Post World War II

Despite postwar reports of every type (Army Ground Force Observer reports, General Boards, after action reports, etc.), articles in professional journals and even entire books describing the value of liaison detachments, the liaison units disappeared shortly after the end of the war. Their existence, a wartime necessity, proved to be an unaffordable peacetime luxury. Greatly reduced strength and equipment tables resulted in skilled officers and expensive radio equipment being put to better use elsewhere. Several serious proposals, one made as late as 1958, called for the formation of PHANTOM/SIAM type battalions in the U.S. Army Reserve or National Guard. They were summarily rejected as no longer being necessary on the modern battlefield. As the U.S. Army lost its operational focus the importance of liaison units in the command and control of corps and field armies became, logically, less visible.

A 1970 book Alternative to Armageddon, collectively authored by a number of distinguished military men including U.S. Generals Lyman L. Lemnitzer and I. D. White, as well as German General Von Manteuffel, proposed the resurrection of a Montgomery type liaison system in the American army. Utilizing deputy or assistant commanders at different echelons as supervisors, groups of highly qualified officer observers would perform duties similar to those of Monty's "Walkers." The generals' proposal, based upon their individual as well as collective experiences, emphasized the point that outside observers from higher headquarters provide both a "silent" as well as extremely effective means of encouraging factual reporting and saving precious time in getting critical, often intangible information to the force commander.

The only use of a liaison system comparable to those of World War II in recent wars has been the use of command liaison patrols similar to those of PHANTOM by the Israel Defense Forces (IDF). The patrols, led by majors in halftracks or armored personnel carriers, provided front line information directly to army command from widely spread rapidly moving combined arms columns operating in the Sinai during the Middle Eastern Wars of 1967 and 1973. Other than the Israeli experience it appears that the many command liaison systems of World War II, despite their recognized effectiveness, have for the most part been totally overlooked as an effective means of enhancing the command and control of modern armies.

Conclusion

This study has illustrated a number of battlefield command and control systems that should have application to the future. In that regard, what conclusions can be drawn from this brief analysis of both traditional and unique means of exercising command in combat, especially in the context of the U.S. Army's new doctrine? There are several.

First, we have learned that throughout military history, regardless of the era or period, changes in force design, advances in technology, new

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staff configurations and the several revolutions in the art of war brought on by these changes, the driving quest for certainty by battlefield commanders has remained an historical constant. Within the overall search for certainty a continuum of functions existed (see Figure 1). In his work, On War, Clausewitz outlined "certainty" as one of the four key elements of war, the others being exertion, danger and chance. He also emphasized that most often " . . . the commander finds himself in a constant whirlpool of false and true information" and as a result of the lack of truly objective knowledge he often has to trust either whatever talent is at hand or just plain luck. The effective use of "whatever talent is at hand" has resulted in the formation of the many information systems that have been reviewed in this study.

FUNCTIONS

Passive	Authority		Active
<u>Couriers</u>	<u>Info Collectors</u>	<u>Observer/Evaluators</u>	<u>Executors</u>
Somatphylaxes Contubernales Napoleonic Aides	Somatphylaxes Contubernales Napoleonic Aides WWI LNO PHANTOM SIAM AIS ATIS	21st AG LNO (Assess capabilities, recommend changes, evaluate "intangibles")	Prussian G. S. (Convey intent direct changes)

(Figure 1)

The commander's timeless necessity for objective, accurate and timely battlefield information has been met by different means, among them being aides-de-camp in the primitive and Napoleonic era, and in the wars of the modern period, by means of liaison officers or general staff observers and signals monitoring. Their existence in one form or another has continued to play a vital role in command for virtually thousands of years. Battlefield command and control realities dictated the use of officers in this capacity even after full staffs came on the scene. From Alexander the Great to the IDF these information gathering systems, when properly used in a "directed telescope" role have proven time and time again to be an instrumental component of effective command and control in combat.

If the systems of the past have similarities so have the officers that have served in them. Normally, "Directed Telescope" functions were performed by aides, liaison officers or general staff officers with similar characteristics. They were usually young, highly charismatic and of relatively junior rank. They were energetic, brave, independent, physically fit and mentally alert. In the more recent periods of military history they became a well trained body of professionally skilled and trained observers

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often belonging to a separate elite corps of officers; the general staff. Their character, judgment, tact and trust have been highly regarded by seniors and subordinates alike. And as a result, they have enjoyed a close, often intimate, relationship with commanders and higher ranking staff officers.

Even though the duties of these officers have differed greatly in practice, in principle they have remained the same. They were used primarily to make observations, and on occasion personal evaluations of front line conditions. They were routinely charged with seeking out the intangible elements of information like morale, esprit and cohesiveness usually not found in routine reports sent up the chain of command. However, they were not by any means restricted to this role, for they also verified the execution of orders, adherence to policies and perhaps of greatest importance, ensured the commander's intent was being followed. They have been least successful when strictly confined to a courier role. Dependent on their authority as agents of the commander, they often issued orders to superiors in his name, an aspect of their role often looked upon with extreme disfavor and on occasion well justified suspicion. Breaking the chain of command in this fashion, regardless of the end result, has been their most negative trait.

In that regard, the historical record of the "Directed Telescope" system is not entirely positive. Numerous events over history have served to confirm the worst fears of those who look upon the system as a breach of the proper relationship between senior and subordinate commander. There are many instances of abuses by aides, observers, and liaison officers who were granted excessive authority. Even worse perhaps, their observations have been taken at face value by commanders resulting in command decisions that brought about failure in battle. Regardless, these negative aspects of the system are more often the exception than the rule. Generally speaking, the value of the system has by far outweighed any problems associated with its sensitive operations. Accepting the overall worth of the system as it has been successfully applied in the past by many great military leaders, what implications exist for its consideration in the development of modern command and control doctrine? Or has technology finally made the "Directed Telescope" obsolete?

AirLand Battle, especially its deep attack aspects, presents one of the greatest challenges ever in the development of an effective command and control apparatus. A fundamental characteristic of the type of leadership inherent in the current U.S. doctrine is that all operations, at every echelon, must proceed from a full understanding of the commanders intent. Helping to establish, clarify and gain commitment to the commanders intent has been a classic role of the aide/command liaison systems of the past. What other characteristics are there with the past? Once again there are many.

Now even more than their World War II predecessors functional staff officers will be consumed by their duties; they will find it exceedingly

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difficult to express important tactical and operational information and to monitor the rapidly changing battlefield. The AirLand Battle doctrine requirement for staff officers to concentrate the operational focus ahead in time and space combined with the technology enabling them to do so will result in an even greater influx of combat information. During World War II SIAM, PHANTOM and the ATIS were created to augment heavily burdened conventional reporting systems, by picking out salient information and sending it directly to the command that needed it most. As a result the World War II systems enabled high level commanders and staff to rapidly anticipate and assess situations allowing them to gain, retain or maintain the tactical and operational initiative. Rapidly and accurately obtaining vital battlefield information specifically requested by commanders enabled them to respond quickly and decisively in countless situations, greatly increasing the overall agility of their operations. The vertical and horizontal liaison functions of the systems also had tremendous command and control implications in the area of synchronization of overall operations. The reconnaissance role of several modern systems (PHANTOM and Patton's "Household Cavalry") provided the commander an additional means to "see deep" in terms of gathering precise and direct first-hand intelligence on the enemy, assessing his capabilities and predicting his actions. Clearly the accomplishments of these systems of the past have application to the development of contemporary command and control doctrine.

Whatever the means sought in the future to obtain the critical information required by commanders in war and provided by the time honored systems discussed in this study, several key questions remain unanswered: Is there a need for a system today to circumvent established command information channels and directly monitor the operations of subordinate commands or has technology rendered the system obsolete? Military history provides cogent reasons for such a system. Modern commanders must assess the situation and judge accordingly.

What about ATIS? why is it left out?

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