

DARKNESS AND LIGHT

THE INTERWAR YEARS

1865–1898

With the end of the Civil War, the great volunteer army enlisted for that struggle was quickly demobilized and the U.S. Army became once again a small regular organization. During the ensuing period the Army faced a variety of problems, some old and some new. These included, besides demobilization, occupation duty in the South, a French threat in Mexico, domestic disturbances, Indian troubles, and, within the Army itself, the old awkward relationship between the line and the staff departments. Despite a relative isolation from civilian society during the period 1865–1898, the Army developed professionally, experimented with new equipment of various kinds, and took halting steps toward utilizing the period's new technology in weapons. In a period of professional introspection and physical isolation, the Army still contributed to the nation's civil progress.

Demobilization, Reorganization, and the French Threat in Mexico

The military might of the Union was put on display late in May 1865, when Meade's and Sherman's armies participated in a grand review in Washington with Sherman's army alone taking six and one-half hours to pass the reviewing stand on Pennsylvania Avenue. It was a spectacle well calculated to impress on Confederate and foreign leaders alike that only a strong government could field such a powerful force. But even as these troops were preparing for their victory march, the War Department sent Sheridan to command an aggregate force of 80,000 men in the territory west of the Mississippi and south of the Arkansas, of which he put 52,000 in Texas. There Sheridan's men put muscle behind previ-

ous diplomatic protests against the presence of French troops in Mexico. The French had entered that country several years earlier ostensibly to collect debts, but since 1864 had maintained their puppet Maximilian on a Mexican throne in the face of opposition from Mexican patriot forces under Benito Juarez. While the American Civil War lasted, the United States had been unable to do more than protest this situation, for even diplomacy if too vigorous might have pushed France into an alliance with the South. Now stronger measures seemed necessary.

The military might in being in May 1865 was ephemeral, for the volunteers wanted to go home and Congress wanted to decrease the size of the Army. Because of the needs of occupation in the South and the French threat in Mexico, demobilization was spread over a period of eighteen months instead of the three in which it could have been accomplished. Nevertheless, it was rapid. On May 1, 1865, there were 1,034,064 volunteers in the Army, but by the middle of November, over 800,000 of them had been paid, mustered out, and transported to their home states by the Quartermaster Corps. A year later there were only 11,043 volunteers left in the service, most of whom were U.S. Colored Troops. These were almost all mustered out by late October 1867.

Lt. Gen. Ulysses S. Grant, the General in Chief, wanted to increase the Regular Army, kept small during the Civil War, to 80,000 men, but neither Secretary of War Edwin M. Stanton nor Congress would agree. Congress, on July 28, 1866, voted an establishment of 54,302 officers and enlisted men. Actual strength reached about 57,000 on September 30, 1867, a peak until 1898. In 1869 Congress cut the number of infantry regiments to 25 and the authorized strength to 45,000. In 1876 the regimental tables of organization were reduced to limit the total authorized force to 27,442, an authorization that remained virtually stationary until the Spanish-American War. A significant effect of the Civil War on the new organization of the Army was a provision in the 1866 act for four African American infantry regiments, reduced to two in 1869, and two African American cavalry regiments, though most of their officers would be white. In 1877 Henry O. Flipper of Thomasville, Georgia, became the first African American graduate of West Point and was assigned to one of these regiments, the 10th Cavalry. The infantry regiments were the 24th and 25th Infantries, and the other Cavalry regiment was the 9th Cavalry. During the long campaigns in the West these four regiments gained a certain measure of fame as tough and disciplined units.

Demobilization was not so rapid that Napoleon III was unaware of the strength of U.S. forces. In the spring of 1867 he finally withdrew his troops from Mexico and left Maximilian to die before a juarista firing squad. While there were other factors that help explain the French emperor's action and historians are not agreed on his motives, he could not have ignored the determination to enforce the Monroe Doctrine embodied in Sheridan's show of force, especially since Maj. Gen. John M. Schofield was then on a special mission in France to make this point clear.



Henry O. Flipper

Reconstruction

The Civil War settled once and for all the questions of slavery and of state sovereignty, but after Appomattox the problems of reconstruction

THE ARMY AND THE FREEDMEN'S BUREAU

Congress established the Bureau of Refugees, Freedmen, and Abandoned Lands in March 1865 to handle problems that had already arisen in Union-occupied parts of the South and were sure to persist after the Confederate surrender—especially that of convincing white southerners that slavery was in fact abolished. The Freedmen's Bureau, as it soon became known, was an agency within the Department of War but not a part of the U.S. Army, although its administrators and field agents were commissioned officers of the volunteers and the regulars. Across the rural South, Freedmen's Bureau agents spent most of their working hours adjudicating differences between landless black farmers and white landowners. The bureau also ran schools funded largely by private benevolent organizations and helped veterans of the U.S. Colored Troops file claims for bounties and pensions. Unfortunately, readmission of seceded states seemed more important to the nation than securing the rights of former slaves, and the Freedmen's Bureau never realized its full potential.

remained and with them the Army's involvement in Southern affairs. The nation had to be put back together, and the peace had to be won or the sacrifices of a terrible war would have been in vain. The Army had a principal role in reconstruction from the very beginning. As the Union armies advanced in the South, the civil government collapsed, except in Sherman's military district, and the Army found itself acting in place of the civil government by extending the function of its provost marshals from policing troops to policing and in effect governing the occupied areas. The duties of these provost marshals ranged from establishing garbage regulations to trying to determine the loyalty of Southern citizens. Near the end of the war, Congress created the Bureau of Refugees, Freedmen, and Abandoned Lands—the Freedmen's Bureau—and put it under the Army. Its primary purpose was to protect and help the former slaves. In late 1865 most of the governmental functions of the provost marshals were transferred to this bureau headed by Maj. Gen. Oliver O. Howard, a Civil War corps commander and a professional officer with antislavery convictions of long standing. As early as 1862 President Abraham Lincoln had appointed military governors, civilians functioning with military support, in Tennessee, Louisiana, and North Carolina.

After Lincoln's death, President Andrew Johnson went ahead with his own reconstruction plans. He declared the Civil War formally at an end in April 1866, liberally pardoned most former Confederates upon their taking a loyalty oath, and then permitted them to reestablish civil government. The leniency of this program, some historians now maintain, led the Army, under Grant, with Stanton in the War Department, to look to Congress rather than to the President, the Commander in Chief, for aid in protecting the Union forces in the South from harassment. Congress at the same time was in fundamental disagreement with the President's course. It therefore asserted its supremacy in a series of legislative acts, undoing all that President Johnson had done and placing the South under military control.

Congress set forth its basic plan in the Command of the Army Act (actually a part of the Army Appropriations Act of 1867) and the

Tenure of Office and the First Reconstruction Acts of March 1867. The first of these provided that all presidential orders to the Army should be issued through the General in Chief, whose headquarters would be in Washington and who could be removed only with Senate approval. Similarly, the Tenure of Office Act denied the President authority to remove Cabinet officers without approval of the Senate. The first of these acts sought to make Grant rather than the President supreme over the Army, while the Tenure of Office Act sought to keep Stanton in the War Department and the next year provided the principal basis for the impeachment of President Johnson when he suspended the Secretary from office without the Senate's consent.

The First Reconstruction Act divided the South into five military districts. The commanders of these districts were major generals who reported directly to Washington. This was an interesting command relationship, for it was customary to divide the country into geographical commands called divisions whose subordinate parts were called departments. In March 1867, however, there were only two divisions, the Missouri and the Pacific, with the rest of the country divided into the five military districts of the South and into departments that like the five districts reported directly to Washington. As time went by, the Army created additional geographical divisions; and in 1870 a Division of the South, comprising three territorial departments, administered military affairs in what had been the five reconstruction districts. There is a difference of opinion as to how much the First Reconstruction Act removed control of the reconstruction forces from President Johnson, although Grant advised Maj. Gen. Philip H. Sheridan, one of the district commanders, that these commanders, rather than the Executive in Washington, were the sole interpreters of the act. In July 1867 Congress incorporated this interpretation in the Third Reconstruction Act, which declared that "no district commander ... shall be bound in his action by any opinion of any civil officer of the United States." As a consequence of the First and Third Reconstruction Acts, some historians regard the reconstruction forces as virtually a separate army under congressional control, thus distinguishing them from the forces in the territorial divisions and departments that remained clearly under the President.

Under the Reconstruction Acts the district commanders had to cope with such matters as horse stealing, moonshining, rioting, civil court proceedings, regulating commercial law, public education, fraud, removing public officials, registering voters, holding elections, and the approving of new state constitutions by registered voters. This occupation duty absorbed somewhat more than one-third of the Army's strength in 1867. As the Southern states were restored to the Union under the reconstruction governments, military rule came to an end and civil authorities assumed full control of state offices. This process was largely completed in 1870.

With the end of congressional reconstruction, the Army's direct supervision of civil affairs in the South came to an end and the number of troops on occupation duty, which already had fallen off markedly, was reduced further. Now its mission was to preserve the new state governments by continuing its protection of the African Americans and their white allies upon whom the governments rested, policing elections, helping to apprehend criminals, and keeping the peace in conflicts be-

tween rival state officials. The Ku Klux Klan, a postwar organization that had a considerable membership by 1870–1871, became an object of special concern to the Army, as it did to Congress, because of the Klan's terrorist tactics employed in an attempt to wrest the South from African American–Radical Republican control. Consequently, one of the most important Army functions in this period was support of federal marshals in an effort to suppress the Klan. This became an Army responsibility despite the restoration of state militia forces under the reconstruction governments as a means of relieving some of the burden on the regular troops, which were spread thin. Since many of these new militia forces consisted of African Americans, they were not very effective against white terrorists, who directed some of their acts against the militiamen themselves. These militia forces mainly performed general police duty and watched over elections and voting. Eventually, because of the opposition of white Southerners to African Americans in uniform, the African American militia forces were disbanded.

In April 1877, as a result of the compromise by which Rutherford B. Hayes became President after the disputed election of 1876, the last of the troops on reconstruction duty in the South were transferred to other duty and the federal military occupation of the South came to an end. The Army's role in the South in the years 1865–1877 was without precedent in the United States.

Domestic Disturbances

Aside from the Indian Wars and Sheridan's show of force on the Mexican border, the Army engaged in no conventional military operations of any consequence until the Spanish–American War, that is, for a period of over thirty years. There were, however, a number of domestic disturbances and incidents in which armed forces were used, not only in the South during the reconstruction period but elsewhere as well. Indeed, by 1878, when Congress forbade the use of federal troops without authorization by either "the Constitution or ... Congress," there had been scores and perhaps hundreds of instances of their use by federal marshals in breaking strikes, enforcing local laws, collecting revenues, and arresting offenders.

In the summer of 1877 the Hayes administration used troops in the wave of railway strikes that marked the country's first great national labor dispute. These strikes spread to a dozen or more states and led to a number of requests for federal help. Thereupon, the Hayes administration pursued a policy of moving troops only to protect federal property or upon the request of a governor or federal judge. The Army stripped every post in Maj. Gen. Winfield Scott Hancock's Military Division of the Atlantic of its available men and also obtained troops from other posts. President Hayes also used some marines. During the strikes the President had his own source of information in Signal Corps observer-sergeants who reported to Washington at intervals concerning conditions as they saw them at their local weather stations.

Under the circumstances of their use, federal troops came into only limited contact with mobs during the 1877 strikes. They nevertheless contributed greatly to the restoration of order, as Hancock reported, "by their presence alone." The positive results were not due to the size of the

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forces, for with only about 24,000 troops in the entire Army in 1877 only a small detachment could be used at any one place. But these regular troops were well disciplined; taking their cue from the President himself, they acted with considerable restraint in putting down the strikes, neither losing a single soldier nor causing the death of many civilians.

Although the Army became involved in other strike duty in the succeeding years of the century, the best-known instance was in the Pullman, or railway, strike of 1894 that, though centered in Chicago, also affected other parts of the country. President Grover Cleveland's order to hastily send troops to Chicago against the wishes of Governor John P. Altgeld provided that they should execute the orders and processes of federal courts, prevent obstructions to the movement of the mails, and generally enforce U.S. laws. In fact, they put down the strike. Other governors also protested the use of federal troops in their states. Maj. Gen. Nelson A. Miles, who commanded the 2,000 federal troops in Chicago (and who had advised against using them in the strike), did not use his men effectively, perhaps at first because he broke them up into small detachments in support of policemen and marshals at scattered points. New orders, however, required him to concentrate his forces and authorized him to fire upon rioters after a proper warning. A small company of regular troops under his command did fire upon a mob in Hammond, Indiana, on July 8, 1894, when they were about to be overwhelmed by many times their own number. At least one rioter was killed and a dozen or more wounded in this action.

The violence was actually much less in 1894 than in 1877; but with only about 28,000 officers and enlisted men in the Army, Schofield, the Commanding General, reported that while his troops performed their duty "promptly and effectively," the situation taxed them "nearly to the limit." He might have added that at least in California both sailors and marines were used. The U.S. Supreme Court unanimously sustained President Cleveland's actions in Chicago during the 1894 strike, with the result that a legal precedent was set for using federal troops within a state without its consent.

The National Guard Movement

Despite the use of regular troops in notable instances, the organized militia under state control saw more strike duty than did the regulars in the years after the Civil War. The volunteer militia organizations that had existed since the colonial period became in effect the only real militia in existence in those years. The events of the seventies in particular led many to fear another insurrection, and as a result Congress introduced legislation to improve and to provide better arms for the organized militia. In 1879, in support of this effort, the National Guard Association came into being in St. Louis; between 1881 and 1892 every state revised its military code to provide for an organized militia. Most states, following the lead of New York, called their militia the National Guard. As such, it was by 1898 the principal reserve standing behind the Regular Army but remaining a state military force.

There was a certain martial enthusiasm in the 1870s and 1880s, despite the general antimilitarism of the period, which swelled the ranks of the Guard. Also, the Guard attracted some persons because it was a

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fraternal group that appealed to the manly virtues of physical fitness, duty, and discipline; it attracted many because it was a kind of social club whose members enjoyed a local prestige. Although organized by states, the Guard had roots in the new nationalism of the period, as may be seen in its very name. Despite this new interest in the Guard, and although the War Department supported the Guard's proposal for a new militia act, apathy, states' rights, and antimilitarism prevented Congress from enacting the desired legislation. Through the efforts of the National Guard Association, the Guard nevertheless succeeded in securing an act in 1887 that doubled the \$200,000 annual federal grant for firearms that the militia had enjoyed since 1808.

Isolation and Professional Development

The industrial unrest of the 1870s and later was a manifestation of the growing industrialization and urbanization of the nation in the last decades of the nineteenth century; but while labor organizations grew as never before, they were of relatively little influence until much later. Meanwhile, perhaps partly as a reaction to the terrible experiences of the Civil War, the ideals and philosophy of what modern historian Samuel P. Huntington calls “business pacifism” became dominant. Among other things, business pacifism rejected things military as outmoded in an industrial world designed to produce and sell goods; and it made an impression upon both intellectuals and the popular mind. It manifested itself as either indifference or outright hostility to the Regular Army, affected military appropriations, and philosophically separated the Army from the people. In the late 1860s and the 1870s, as Army appropriations fell off (and in 1877 were not even made until November), the Army became isolated from the society at large. It became isolated not only socially, but physically as well, for much of the Army was on lonely duty in the West. Those years, according to Army historian William A. Ganoe, were “The Army's Dark Ages.” They caused the Army and the Navy to look inward and to develop a truly military viewpoint that differed fundamentally from business pacifism and civilian liberal thought in general.

Paradoxically, in Huntington's words, the post-Civil War years were actually “the most fertile, creative, and formative in the history of the American armed forces.” It took such a period of peace to develop the professionalism that would find employment in the world wars of the next century. In the Army, this professionalism took shape largely under the impetus of two men, General William T. Sherman and Col. Emory Upton, with the help of other reformers of lesser rank. Their contemporary, Rear Adm. Stephen B. Luce, was similarly the architect of a new professionalism in the U.S. Navy.

Sherman's fame of course rests upon his record in the Civil War, but he was also the Commanding General of the Army for almost fifteen years from 1869, when he succeeded Grant, to 1883, when Sheridan succeeded him—a record second only to that of Winfield Scott. Unlike Grant and two of the other five Commanding Generals before him, Sherman remained out of politics and thus began the tradition of political neutrality, which would be adhered to long after his time, although not religiously. In this and other ways he oriented the thought of the

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EMORY UPTON (1839–1881)

Emory Upton, West Point Class of 1861, emerged from the Civil War with a reputation for tactical innovation that he cemented with the 1867 publication of *A New System of Infantry Tactics*. Adopted by the Army, Upton's system recognized the impact of breechloading rifles and other new technologies. He promoted reforms based on the Prussian military system and ideas such as the compulsory retirement of officers, advanced military schools, and examination for promotion. Secretary of War Elihu Root would arrange for the publication of *The Military Policy of the United States*, Upton's unfinished manifesto, as the basis for his own reform agenda. Upton sowed the seeds for a federal reserve force and an expansible army built upon a professional core. Some later interpreters would skew his work to fit their own purposes. Some of these interpretations would exacerbate the natural tensions between that professional core and the volunteer, citizen-soldiers who must under wartime circumstances provide the bulk of the manpower for the Army.



Emory Upton

professional soldier. As Commanding General he became the architect for a system of postgraduate schools beyond the Military Academy through which an officer could learn the skills of his own branch of the service and finally the principles of higher command.

Emory Upton, a protégé of Sherman's, was the most influential of the younger officers who worked to reform the Army. He graduated from West Point in 1861 and was brevetted a major general during the Civil War. After the war he prepared a new system of infantry tactics; served as commandant of cadets at the Military Academy, 1870–1875; went on a mission to study the armies of Asia and Europe, which left him especially impressed by the German military system; and then became superintendent of theoretical instruction in the Artillery School at Fort Monroe. His best-known writings, *The Armies of Asia and Europe* (1878) and *The Military Policy of the United States* (1904), argued for numerous reforms. The second of these two books was unfinished at the time of his death by suicide in 1881 but was put in order by an associate and, circulating in the Army, became influential long before its publication. It presented a case for a strong regular military force based upon U.S. experience and subsequently provided the Regular Army with intellectual ammunition for shooting down the arguments of militia advocates for whom John A. Logan provided a text in his posthumously published *Volunteer Soldier of America* (1887). In Upton's view, a wartime army should consist entirely of regular formations, which meant that all volunteers should serve under regular officers. Upton borrowed this plan for an expansible Regular Army from John C. Calhoun. Without giving due weight to the strength of tradition, he wanted the United

States to abandon its traditional dual military system and replace it with a thoroughgoing professional army on the German model.

The Military Academy at West Point was at the base of the pyramidal structure of the Army educational system. Unfortunately, much of the vitality went out of the instruction at West Point after 1871 with the departure of Dennis Hart Mahan, the intellectual godfather of the postwar reformers. Although the War Department removed West Point from control of the Corps of Engineers in 1866, the Academy continued to provide heavily mathematical training and to turn out military technicians but at the same time lost its former eminence as an engineering school. As time went by, the technical content of the curriculum in both the Military Academy and the Naval Academy was reduced; but by 1900 the effort to combine basic military and liberal arts subjects set both institutions off from other collegiate institutions and from the mainstream of education in the United States.

The period of reduced emphasis on technical instruction at the Military Academy saw the rise of the special postgraduate technical schools that Sherman favored. When the Engineers lost their responsibility for West Point in 1866, a group of engineer officers founded the Essayons Club, which became the Engineer School of Application in 1885. In 1868 Grant revived Calhoun's Artillery School at Fort Monroe, Virginia, which had been closed since 1860. Also in 1868 a signal school of instruction opened at Fort Greble, D.C., and in 1869 moved to Fort Whipple (later Fort Myer), Virginia, where it continued until 1885. In 1881 Sherman founded the School of Application for Infantry and Cavalry at Fort Leavenworth, Kansas. Although at its beginning this school was little different from any of the other branch schools, it eventually fulfilled Sherman's hopes and evolved, with much of the credit due to Col. Arthur L. Wagner, into the General Service and Staff College. The Medical Department under Surgeon General George Miller Sternberg founded the Army Medical School in 1893.

Included in the act of 1866 that fixed the organization of the post-war Army was a provision authorizing the President to detail as many as twenty officers to teach military science in schools of higher learning. This supplemented the part of the Morrill Act of 1862 that had provided for military instruction in land-grant colleges. By 1893 the number of instructors had increased to one hundred. In this program can be seen the beginnings of the Reserve Officer Training Corps, although it would not be organized as such for many years.

Another significant aspect of the developing military professionalism of the years following the Civil War was the founding of professional associations and journals. Notable among them were the U.S. Naval Institute, founded in 1873, whose *Proceedings* would become well known; the Military Service Institution of the United States, whose *Journal* would become a casualty of World War I; the United States Cavalry Association, which published the *Cavalry Journal*; and the Association of Military Surgeons, which published *The Military Surgeon*. In 1892 the Artillery School at Fort Monroe founded *The Journal of the United States Artillery*; and in 1893 a group of officers at Fort Leavenworth founded the Infantry Society, which became the U.S. Infantry Association the following year and later published the *Infantry Journal*. Earlier, in 1879, *United Service* began publication as a journal of naval

FORT LEAVENWORTH AND THE WEST

The site of Fort Leavenworth, Kansas, on a bluff on the west bank of the Missouri River, is testimony to the independent judgment that army officers often had to exercise in 1827, the year of the fort's founding. Under orders to find a suitable site on the east bank of the river, Col. Henry Leavenworth was unsatisfied with the terrain. He continued upstream until he came to a likely place on the west bank. Twenty years later national expansion put Fort Leavenworth in the middle of the United States, and by 1882 it had become the logical spot for a school to further the education of cavalry and infantry lieutenants. The School of Application, as it was called, provided junior officers from the Army's scattered, often tiny garrisons with an education fit for the age of steam and electricity, of breechloading weapons and the new smokeless powder. Its successor, the Command and General Staff College, is still there. Fort Leavenworth is the oldest continually occupied Army post west of the Mississippi River.

and military affairs. Still earlier, in 1863, the *Army and Navy Journal*, as it came to be called, began a long run. It was not a professional journal like the others, but along with its social and other items about service personnel it carried articles, correspondence, and news of interest to military people that helped bind its readers together in a common professional fraternity.

Before the Civil War the Army had no professional personnel system in the modern sense. Traditionally, most officers came into the service from the Military Academy at the lowest rank and received promotions on the basis of seniority. The war, however, at least made the need for a retirement system evident; and in 1861 Congress provided for compulsory retirement for incapacity. In 1862 and 1870 it provided that after thirty years' service an officer might retire either voluntarily or compulsorily at the President's discretion. Finally, in 1882 legislation made retirement compulsory at age sixty-four, which prompted the retirements of Sherman, Maj. Gen. Montgomery C. Meigs, and Surgeon General Joseph K. Barnes. Beginning in 1890, promotions for all officers below the rank of major were by examination, thus insuring a minimum level of professional competence. In the mid-nineties, the Army instituted systematic character and efficiency reports for all officers.

Line and Staff

There was no end, during the years between the Civil War and the turn of the century, to the old controversy between the line of the Army and the staff departments. The controversy had its roots in a legally divided responsibility and received nourishment from a conception of war as a science and as the natural purpose of the military. Although Congress made Grant a full general in 1866, and although Sherman and Sheridan both held that rank after him, neither these officers (except Grant during postwar reconstruction) nor their successors were able to avoid the basic organizational frustrations of the office of Commanding General. The problems were inevitable because, as Army regulations put it as late as 1895, the military establishment in the territorial commands was under the Commanding General for matters of discipline

and military control, while the Army's fiscal affairs were conducted by the Secretary of War through the staff departments. At the same time, no statutory definition of the functions of the Commanding General existed except to a limited extent late in the century in the matter of research and development. In practice this situation also diluted the Commanding General's control of the territorial departments, since obviously the distribution and diversion of logistical support for these departments by the staff heads and the Secretary of War would affect troop operations.

Basic to the controversy was an assertion of the primacy of the line over the staff departments, for which there was a theoretical foundation in the developing conception of war as a science and the practice of that science as the sole purpose of military forces. Since the Army existed only to fight, it followed that its organization, training, and every activity should be directed to the single end of efficiency in combat. Therefore, the staff departments, representing a technical-expertise approach to war, existed only to serve the purposes of the line, which represented professionalism. From that proposition it followed that the line, in the person of the Commanding General, should control the staff. It also followed that the Army should not become involved, as it did, in such activities as the advancement of science or exploration.

"The regular Army now is a very curious compound," Sherman observed in 1874 in hearings on a bill to reduce the Army. As the Commanding General, he had "no authority, control or influence over anything but the cavalry, artillery, and infantry, and such staff officers as are assigned by their respective chiefs, approved by the Secretary of War, and attached to these various bodies for actual service." To him the three services that he named were "the Army of the United States," while the rest simply went "to make up the military peace establishment." If the Army had to be pruned, he advised pruning the branches of this peace establishment, not the active regiments. To a question about who commanded the engineer battalion, he replied "God only knows, for I do not." In his opinion the Ordnance Department was "the softest place in the Army." Sons and nephews wanted to go into it, he declared, "especially young men with influential congressional friends." As for the 450 men of the "signal detachment," Sherman regarded them as "no more soldiers than the men at the Smithsonian Institution. They are making scientific observations of the weather, of great interest to navigators and the country at large. But what does a soldier care about the weather? Whether good or bad, he must take it as it comes."

Sherman's view was that of the Army command and of the line, but it did not prevail. In 1894 the situation in which heads of the staff departments spent their entire careers with their specialty and became technical rather than military experts was modified by the requirement that thereafter appointments to the staff departments should be from the line of the Army. However, this left the basic command problem still unresolved.

Technical Development

The record of the Army's technical development in the years down to the end of the century was not one of marked and continuous prog-

ress in every field, for it was hampered by military conservatism, insufficient funds, and the nation's slowness in adapting inventive genius to the art of war. Yet there was considerable progress. In transportation, with the extension of the trans-Mississippi railroads, it became possible to move whole wagon trains by lashing the wagons to flatcars and transporting the mules in closed cars. In ordnance there was progress, however slow; and there were notable beginnings, some of them of vast potential, in signal communications.

The Army was about as slow in adopting new weapons as it was in solving the problem of command that had plagued it for so long. Although Henry and Spencer breechloading repeating rifles with rim-fire cartridges were used during the Civil War, the typical Civil War infantry shoulder arm was a muzzleloading rifled musket. In the years immediately following the war, the Ordnance Department, faced with a shortage of funds, converted thousands of the Civil War muzzleloaders into breechloaders. Desiring a better weapon, however, the Army convened a board in 1872 to examine and test existing weapons. After the board had examined over a hundred weapons, the Army adopted the single-shot Model 1873 Springfield breechloader. This fired a center-fire, .45-caliber cartridge, the caliber that the Ordnance Department selected as most desirable for all rifles, carbines, and pistols. The 1889 model of this gun, which embodied its final modifications, was the last of the Army's single-shot, large-caliber, black-powder rifles and the principal shoulder arm of the National Guard as late as 1898.

The Springfield remained in service even after the adoption of newer weapons and despite the trend toward smokeless powder and repeating arms abroad. U.S. manufacturers were slow to develop the new powder, which had several clear advantages. It burned progressively, gradually increasing the velocity of the bullet as it traveled through the barrel. In addition, its increasing pressures permitted a refinement in the rifling that gave a greater spin to the bullet and produced a higher velocity and a flatter trajectory.

When smokeless powder became available in the United States, a board in 1890 recommended the adoption of the Danish .30-caliber, bolt-action Krag-Jørgensen rifle, which fired smokeless cartridges and had a box magazine holding five cartridges. The Army adopted the Krag, as it came to be known, in 1892; but Congress delayed production at the Springfield Armory for two years, until tests of fourteen American models failed to find a superior weapon. By 1897 the Krag had been issued throughout the Regular Army. When its manufacture was discontinued in 1904, the original 1892 model had been modified twice, in 1896 and 1898.

Of the several types of the early machine gun available during the Civil War, the most successful was the Gatling gun, which the Army did not adopt until 1866 when the war was over. Even the advocates of this gun failed to recognize its usefulness as an infantry weapon but instead looked upon it as either auxiliary to artillery or as a useful weapon for defending bridges or other fixed sites.

In artillery as in shoulder arms American technical genius lagged behind that in Europe, where breechloading artillery using smokeless powder became common in the late nineteenth century. Other European improvements were explosive shells and recoil-absorbing devices,



*Model 1898 Krag-Jørgensen Rifle,
.30-.40 Caliber*

which permitted refring without re-aiming after every shot and opened the way to sophisticated sighting mechanisms and highly accurate indirect fire. Also, in the year before the Spanish-American War the French invented their famous 75-mm. gun. The U.S. Army nevertheless adopted some good rifled breechloaders, with the 3.2-inch rifle as the standard light field piece. These new guns replaced the old smoothbores, and steel replaced iron in their construction; but they still used black powder. The Army also had begun to experiment with steel carriages, pneumatic or hydraulic brakes, and mechanisms for elevating, traversing, and sighting artillery pieces.

The progress in artillery and armor plate was at least partly the result of the work of several boards. The first of these was the joint Army-Navy Gun Foundry Board provided by the Naval Appropriations Act of 1883. Its purpose was to consider the problem of how American industry could produce both armor plate and armor-piercing guns, upon which a modern navy depended, that would be comparable to the products of European industry. After touring European armament factories, the board recommended that the government award generous contracts to U.S. companies to stimulate their development of steels and forgings and that the government itself assemble the new materials into weapons at both the Naval Gun Factory and Army arsenals.

The new interest in the Navy in those years resulted in a need to examine coastal fortifications, which would have to be improved if new ships were not to be tied down to defense of the principal harbors. As a consequence the Endicott Board was set up in 1885 to plan for restoration of the coastal fortifications. Neither the world situation nor the existing naval technology justified the estimated cost of implementing the board's recommendations, but in 1888 Congress voted an initial appropriation and established a permanent body, the Board of Ordnance and Fortification, to supervise programs concerned with preparing coastal fortifications. This board was significant as the first War Department-wide agency for supporting research and development and as an attempt to place the important staff departments partly under the control of the Commanding General. Moreover, its failure served to point out the defects in the War Department's organization. The board remained in existence until 1920, but in 1890 and 1891 engineer expenditures and in 1892 ordnance expenditures were removed from the board's supervision. The actual work on the fortifications that followed was never completed, but during the nineties the Army abandoned the old forts around the principal harbors in favor of earthworks, armor-plated concrete pits, and great 10- and 12-inch disappearing rifles.

During the years after the Civil War there were several significant developments in signal communications under the Signal Corps, known as the Signal Service for many years. In 1867 the War Department restored electric field telegraphy to the Signal Corps, which had lost responsibility for it about three years earlier; and the corps quickly developed a new flying or field telegraph train, using batteries, sounders, and insulated wire. Then after constructing a telegraph line along the east coast in 1873 as an aid to the Life-Saving Service, the Signal Corps built long telegraph lines in both the Southwest and Northwest to provide communication between isolated military posts. These also

provided facilities for transmitting weather reports. By 1881 these lines extended for slightly more than 5,000 miles.

In the late seventies, within a year or two of Alexander Graham Bell's patenting of the telephone, the Army was using it experimentally at Fort Whipple and between that post and Signal Corps offices in Washington. By 1889 a field-telephone kit, combining the Bell telephone, a Morse key, and a battery, had been developed but was believed too expensive for manufacture and issue at that time. About three years later, of ninety-nine garrisoned posts, fifty-nine had telephone equipment, some belonging to the Signal Corps and some rented from the Bell Telephone Company. About the same time the Army began using the telephone, it also became interested in the heliograph (mirrors reflecting sunlight to transmit Morse code) and found it to be particularly useful in the Southwest. There were also experiments as early as 1878 with homing pigeons.

Perhaps most significant of all the Signal Corps experimentation and developments of the period was the reintroduction of balloons into the Army in the early nineties for the first time since the Civil War. In 1893 the Signal Corps exhibited a military balloon at the World's Columbian Exposition in Chicago, and in 1896 it organized a model balloon train at Fort Logan, Colorado. Here were the beginnings that would lead to the development of Army aviation.

The backwardness of the United States in military technology in the 1890s, despite some important developments, would be misleading unless one looked beyond the specific military facts to examine the nation's industrial base. The United States was already an industrial giant. In 1890, only twenty-nine years after the beginning of the Civil War, the United States pulled ahead of Great Britain in the production of both pig iron and steel and thus became the world's leading producer. Moreover, in the decade of the nineties, the United States also surpassed Great Britain in coal production. In total manufactures, the nation's share jumped from less than 20 percent of the world volume in 1880 to more than 35 percent in 1913. With such an industrial base and potential, the Army of the nineties had no real need for concern.

Civil Accomplishment

The U.S. Army performed a variety of highly useful civil functions in the interwar years, despite the new professionalism that decried such activities as contrary to the natural purpose of an army. Upon the United States' purchase of Alaska from Russia in 1867 the Army assumed responsibility for Alaskan affairs except in matters concerning customs, commerce, and navigation, which became a responsibility of the Treasury Department. This situation continued until June 1877, when the Army withdrew from Alaska (partly because of the cost of maintaining a garrison in so remote a place) and left the Treasury Department in charge. For the next twenty years the Army's principal role in Alaska was in support of various explorations conducted by Army personnel, which had begun at least as early as 1869 when Capt. Charles W. Raymond of the Army Engineers explored the Yukon. Thereafter there were other explorations in the Yukon, the region of the Copper and Tanana Rivers, and to Point Barrow by variously 1st Lt. Frederick Schwatka of the

The U.S. Army performed a variety of highly useful civil functions in the interwar years, despite the new professionalism that decried such activities as contrary to the natural purpose of an army.



Members of the Greely Expedition. Lieutenant Greely is in the front row, fourth from the left.

3d Cavalry, 2d Lt. William R. Abercrombie of the 2d Infantry, 2d Lt. Henry T. Allen of the 2d Cavalry, and 1st Lt. Patrick Henry Ray of the Signal Corps.

Ray's expedition to Point Barrow, 1881–1883, was successful in carrying out various meteorological and other observations. It returned safely, but the companion Lady Franklin Bay expedition to Ellesmere Island, 1881–1884, under 1st Lt. Adolphus W. Greely of the Signal Corps, was not nearly so fortunate. Although the Greely expedition reached a point farther north than any prior expedition and carried out its scientific observations, all but seven members of the party died before rescue (and one person died afterward) through failure of prearranged plans for receiving supplies. The Greely expedition grew out of the plans of Signal Corps 1st Lt. Henry W. Howgate for an Arctic colony at Lady Franklin Bay and out of the proposals of the International Polar Conference in Hamburg in 1879 for a chain of meteorological stations about the North Pole. The Ray expedition stemmed from the Hamburg Conference.

After the Civil War, the rivers and harbors work of the Corps of Engineers increased considerably, contributing substantially to development of the nation's water resources. Other notable contributions of the Engineers included their construction of public buildings, including supervision of the final work on the Washington Monument and on the State, War, and Navy Building, together with Brig. Gen. Thomas L. Casey's planning and supervision from 1888 to 1895 of the construction of what is now the main building of the Library of Congress. Beginning in 1878, the Engineers provided an officer to serve by presidential appointment as one of the three governing commissioners of the District of Columbia.

Of the four great surveys undertaken in the United States prior to establishment of the Geological Survey in the Interior Department

in 1879, the Corps of Engineers had responsibility for two: the King Survey, 1867–1872, which made a geological exploration of the 40th Parallel, and the Wheeler Survey, 1871–1879, the geographical survey west of the 100th Meridian. The latter was more of a military survey in the tradition of the old Corps of Topographical Engineers than was the former, essentially a civilian undertaking. Both of these surveys nevertheless collected specimens of great use to scientists in the fields of botany, zoology, paleontology, and related disciplines.

Although the Navy was largely responsible for interoceanic canal surveys in the post–Civil War years, the first U.S. Isthmian Canal Commission, appointed by President Grant in 1872, had Brig. Gen. Andrew A. Humphreys, Chief of Engineers, as one of its three members. In 1874 Maj. Walter McFarland, Corps of Engineers, went out with naval assistance to examine the Nicaragua and Atrato-Napipi canal routes; and in 1897 Col. Peter C. Hains of the Engineers was one of the members President William McKinley appointed to the Nicaragua Canal Commission.

In the years from 1870 to 1891 the War Department organized and operated under the Signal Corps the nation's first modern weather service using both leased telegraph lines and, after they were built, the Army's own military lines for reporting simultaneous observations to Washington. Under Brig. Gen. Albert J. Myer, the Chief Signal Officer, the service gained international renown; but partly because of the hostility of the War Department and the Army to the essentially civil character of the weather service and to its cost, Congress in 1890 directed transfer of the service to the Department of Agriculture, where it became the Weather Bureau in 1891. This loss of the weather service marked a general decline in the role of the military services in the cause of science. Although the Signal Corps retained responsibility for military meteorology, the Army had little need of it until World War I.

Of all the Army's civil contributions, those of its Medical Department, with immeasurable implications for the entire society, may well have been the most important. Indeed, medical research in the Army, in which a few outstanding men were predominant, did not reflect the decline in research that affected the other military branches of the period. One of the most notable of the Army's medical contributions was the Army Medical Library, or the Surgeon General's Library, which, though founded in 1836, did not come into its own until after 1868, when Assistant Surgeon John S. Billings began to make it into one of the world's great medical libraries. Similarly, in the same period, Billings developed the Army Medical Museum, which had been founded during the Civil War, into what would become in fact a national institute of pathology.

George Sternberg, who became the Surgeon General in 1893, was the leading pioneer in bacteriology in the United States and a worthy contemporary of Louis Pasteur and Robert Koch. Sternberg's official duties provided some opportunity for his studies, although he performed most of his research independently, some of it in the Johns Hopkins Hospital in Baltimore under the auspices of the American Public Health Association. He was appreciated by all except the more conservative of his colleagues who resisted the germ theory to about the same degree as physicians in private practice.

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The more than three decades from the end of the Civil War to the Spanish-American War took the Army through a period of isolation and penury in which it engaged in no large war but in which it had opportunity for introspection. It took advantage of this opportunity and in professional ways that would mean much to its future success moved from darkness and near despair into the light of a new military day. Yet throughout this period, the Army was engaged in a more active mission that for many allowed little time for retrospection or leisure, a mission that shaped Army traditions and myths for years to come. The Army had a war to fight before it would see accomplished at least some of the reforms toward which the new military professionalism looked—a long war in the American West against the Indians, or Native Americans.

DISCUSSION QUESTIONS

1. What was the role of the U.S. Army in the occupation of the Southern states after the Civil War? Why was this such an unpopular mission?

2. What role should the U.S. Army have in domestic disturbances such as riots, large-scale strikes, etc.? What more recent uses of the Army in domestic interventions can you think of?

3. What is the difference between the militia and the National Guard?

4. What does the phrase “military professionalism” mean to you? Is the purpose of military education the learning of technical skills, the inculcation of a professional ethos or culture, or something else completely?

5. The argument of “line versus staff” is no longer as contentious as it once was. However, are there still differences between officers who are technical experts and those who are more generalists? If so, why is this a problem?

6. To what extent should the Army be involved in essentially non-military missions such as exploration, weather forecasting, or other “civilian” occupations?

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