7 Branch Stagnation: American Field Artillery, 1919–1939

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CHAPTER 7

Branch Stagnation

*American Field Artillery, 1919–1939*

In his branch history of the U.S. Field Artillery, Boyd L. Dastrup concludes his chapter dealing with the interwar period with the following assessment:

Consequently, with the exception of adoption of the M2 105-mm. howitzer and M1 155-mm. gun in 1940, the development of improved fuses, and the creation of the fire direction center during the 1930s, the field artillery had not changed much since 1918. On the eve of World War II, antiquated weapons and thinking characterized the field artillery. Some progressive officers had tried to move the field artillery forward, but conservatism, limited funds, and pacifism overwhelmed them, limited serious reform and rearmament, and left the field artillery poorly prepared, technologically and tactically, to fight armies that were adopting the latest weapons and innovative tactics.¹

Low budgets and the demoralizing return of the apathy and even disdain toward the military that had become traditional in American culture were problems with which all the combat branches in the army were familiar. None, however, seemed so enervated by conservatism as the field artillery. Some causes of this are obvious. Unlike the coast artillery or the cavalry, the field artillery emerged from the world war with its mission vindicated and intact. Nor was its future significantly threatened by either of the two technological *wunderkinder* of the war, the airplane or the tank.

Another, less apparent, but still significant factor shaping the mentality of the field artillery was its particular position between two major and almost revolutionary developments within it as a combatant force. The first of these was a technological revolution that transformed both the weapons and tactics of
field artillery to a degree that had not been seen in the past three centuries. The second was a transformation of the service into a modern military profession. Both developments began in the United States in the early 1880s and were radically accelerated by participation in the world war. But, at the end of the war, the technological revolution had virtually come to an end, represented by a stabilized weapon system, while the professional revolution was still in midflight. As a result, much of the dynamic and creative energies of the field artillery in the interwar period were directed toward shaping its development as a corporate body along lines dictated by American military professionalism at this time.

Of the two revolutions transforming artillery worldwide, the more significant was in weapons technology. This was not only precipitated by the desire of military leaders to have artillery capable of greater ranges and more rapid fire but was also heavily stimulated by technological developments. The most significant of these included new steels and new propellants that led to weapons with far greater range, breech loading, and fixed ammunition that allowed for a vastly increased rate of fire.²

The experience of the world war demonstrated that, taken together, these new developments created an artillery arm of fearsome power and lethality. This, in turn, led to a revolution in tactics. Deserting a battlefield that had now become too lethal for crews, guns were now located in fire pits well back from the front lines. And since the guns were now well behind the infantry and their targets were also dug in, there was a movement away from direct fire from standard guns, with their horizontal trajectories, to indirect fire from howitzers, with their arching trajectories.³ More important, animal traction as the means of moving artillery began to give way to motor traction, principally in the form of tracked vehicles. The impetus for this later change came from the fact that the new, larger artillery weapons were too heavy for animal traction. But as motor vehicles began to prove themselves more reliable, there was a move to motorize light artillery as well.⁴ By the end of the war, the technological revolution was all but completed, and artillery technology stabilized for the remainder of the century.

The United States was not far behind Europe in the technological revolutions. One reason for this was the leadership given by the Ordnance Department in the development of new weapons. By 1902, the department had developed a 3-inch rapid-fire gun to rival the French 75-mm gun. Other guns and howitzers soon followed.⁵ In 1913 the army bought its first tractor to experiment with motorization. Americans were also quick to follow European leads in developing tactical responses to the technology revolution.⁶ And they continued to adapt quickly to European patterns during the world war. The army gave up the 3-inch gun in
1916 and accepted not only the French 75-mm gun but also the idea of designing guns on the metric system. Many artillerymen also became enthusiastic about motorization during the war, with some arguing in favor of a full transition as soon as possible. Finally, American artillerymen in France adopted the tactics of trench warfare and unobserved fire. By the end of the war, American artillery officers had such confidence in the basic weapons used in the war that they saw no reason to do any more in the future than tinker with them.

On the other hand, while U.S. field artillery was as advanced as any in the world by 1919, American artillery officers lagged significantly behind their European counterparts in terms of developing a branch structure. Although recognized as a combat arm for much of the nineteenth century, it was not an organized branch. “Artillery” itself was an undifferentiated term that applied to both heavy coastal guns defending harbors and light terrestrial guns supporting mobile field units, with officers rotating between service in the field and service in coastal forts.

In the final decades of the nineteenth century, however, this situation began to change, and conditions emerged favorable to the development of field artillery as a distinct branch. This was due, in part, to the technological revolution. Serving the new artillery guns was increasingly seen as a science calling for a high degree of specialized knowledge. These currents were felt much more strongly among artillerymen in the coastal fortresses than among their brethren in the field. Hence, the coast artillery led an effort to divide U.S. artillery into two branches, a movement that reached its conclusion with the Artillery Act of 1907, which split artillery into coast artillery and field artillery. In doing so this law provided all the institutions needed to form a branch to the coast artillery. The chief of artillery (renamed the chief of coast artillery), the Artillery School, and the *Journal of the United States Artillery* all went with the coast artillery, leaving the remaining six field-artillery regiments as virtual orphans. Leadership within the six soon surfaced, however, to begin efforts to create a branch organization based on current professional models. By 1911, both a professional school, the School of Fire at Fort Sill, and a professional publication, the *Field Artillery Journal*, had appeared.

Nevertheless, the branch organization of the field artillery and the professional development of its officers was still weak as the United States entered the world war. The mobilization for the conflict, then, quickly tore apart whatever organization that existed, making the war a virtual born-again experience for the field artillery. By the spring of 1917, there were only 275 officers in the field-artillery service with more than one year of experience. At the end of the war nineteen months later, that number had expanded by nearly 10,000 percent.
The School of Fire was radically expanded to turn out artillery officers in three months. The result was a rapid expansion of the field artillery’s officer corps at the cost of a severe dilution of its quality and original identity.

A major step toward dealing with this confusion was made in February 1918 with the appointment of Major General William J. Snow as chief of field artillery. Snow, who had created and rapidly expanded the wartime School of Fire to train field-artillery officers, was able to bring some order out of the confusion, although he also had difficulties getting his authority accepted. Thus, at the end of the war, the field artillery emerged with a well-developed and well-accepted weapons system, which seemed to need little more than fine-tuning, and with a branch structure that lacked acceptance and organization, which was filled with a mass of hastily educated officers and had little in the way of tradition on which to build unity.

Almost as soon as the world war was over, the field artillery, along with the rest of the army, began planning for its own postwar reconstruction. As with other branches and services, the field artillery sought to base this on the lessons learned in the war. This search for lessons, in turn, spawned the creation of special boards that solicited testimony from many officers regarding their combat experiences. From that evidence, the panels developed recommendations for future development. The recommendations of four of these boards provided the basis for much of the agenda for the field artillery in the interwar period.

The most important of these were, first, that the chief tactical mission of field artillery was to work in close cooperation with the infantry; second, that field artillery should be considered a system of “mutually dependent, light, medium, and heavy pieces;” and, finally, that future weapons development be seen in terms of both “ideal” weapons to be designed and deployed in the future and “practical” alternatives that could be had immediately by modifying existing armament. Hence, as it entered the postwar period, the field artillery had a rather clear three-part agenda before it. It sought to create an ideal armament mix, to develop further its overall tactical doctrine, and to rebuild and strengthen the cohesion of the branch as an organization.

During the first six postwar years, however, the field artillery was unable to give its attention to any of these objectives, as its leadership had to deal with the instability within the branch caused by demobilization and developments within the army in the first half of the 1920s. The demobilization process was particularly disruptive. In addition, reorganization efforts in the early 1920s led to frequent transfers of artillery officers, so few stayed long in command of units. As late as 1925, only sixty-nine captains in the field artillery had been with their units for as long as two years.
Until the middle of the 1920s inadequate personnel levels among both officers and enlisted men was seen as the most serious problem facing the branch. Of the two, the shortage of officers was the source of greatest concern. After the 1922 reduction, the authorized officer strength of the branch was 1,499. This strength level, however, was finally achieved only in 1931, although the most serious deficiencies were overcome by 1926. Moreover, the field artillery also suffered from a shortage of enlisted men until 1925, as field artillery was considered to be more work than service in other branches. As a result, soldiers in field artillery often reenlisted in other branches at the end of their term. By the middle of 1923, the field artillery had only 14,504 of its authorized 16,771 enlisted men, the largest deficiency of any branch in the army. By 1925, however, these personnel problems seemed to be coming to an end.

Field artillery in the first half of the 1920s was also very much involved with the development of the civilian components. Having seen its experience with citizen-soldiers in the world war as generally positive, the field artillery generally took its role in training the civilian components seriously. During the early 1920s, it was quite positive toward the National Guard. The chief of field artillery took pains to select officers to serve as instructors in guard units who were noted for tact and patience. By the late 1920s, however, he was concerned that the high rate of turnover in guard units severely lowered their military value. Later, the chief’s office seemed to lose interest in the Guard, possibly feeling that the Militia Bureau had shut it out of any role in training that component.

The field artillery was also aware of the value of the Organized Reserve in terms of a wartime mobilization and lavished attention on it. With the passage of the National Defense Act of 1920, leadership quickly estimated that the branch would need 20,000 field-artillery officers in the Organized Reserve to meet the mobilization goals set forth in the legislation. After that, the major focus of field artillery in regard to the Reserve was numbers, with progress measured by nearing the 20,000 goal.

Yet for the field artillery, the darling among the civilian components was the ROTC. The branch took an active interest in the ROTC almost as soon as the world war was over. One of the few officers in the Office of the Chief of Field Artillery was assigned almost exclusively to ROTC work. This officer worked assiduously to establish field-artillery ROTC units so that, by the time of the passage of the National Defense Act, twenty-two had already been created. After this, the chief of field artillery continued to maintain great interest in them, with the designated officer still devoting most of his time to the ROTC units, inspecting many of them annually. The chief also worked to standardize the curriculum
and summer camps. His greatest concern was lack of control, since ROTC units operated under the direct control of corps-area commanders.18

Although these issues were significant distractions for the field artillery in the first half of the 1920s, they did not halt the pursuit of an agenda created by wartime experience and by the several boards convened afterward. As noted earlier, this agenda had three parts: developing the tactical doctrine worked out during the world war, developing weapons to incorporate the ideas set by wartime experience, and continuing the development of the branch organization, which was disrupted first by the war and then by postwar demobilization.

Of these three objectives, the easiest by far was the further development of tactical doctrine since field-artillery officers emerged from the war largely satisfied with the doctrine developed there. Afterward, little happened in the army or in the nation that challenged it, so little change occurred in the interwar period. The essence of field-artillery doctrine was that the chief, if not sole, mission of artillery was to support the infantry. The centrality of this was acknowledged repeatedly in the reports of the postwar boards as well as in the professional literature in the subsequent two decades.19 Infantry support was the basis upon which the tactical organization of field artillery at the division, corps, and army-headquarters levels was based. Although the concept remained unexamined and unchallenged during the interwar period, there was a major initial controversy as to how it was to be carried out.

The issue was whether American artillery doctrine was to be based on the observed fire of open warfare or the unobserved fire of trench warfare. Prior to the American entrance into the world war, the doctrine had been based on observed fire. Then, as noted earlier, exigencies of the war led to American adoption of unobserved fire as taught by the French. As Richard Faulkner points out, since the training of artillery officers in the United States was so sparse, most American officers were trained by the French.20 Thus, many came to see the French system, with its strong base in science and mathematics, as more advanced and superior to the older American system, which some now even saw as obsolete.21 General Snow, however, who remained the chief of field artillery after the war, believed otherwise, and by the end of 1919, he dictated that American field-artillery doctrine would remain based on observed fire.22 The directive caused a major uproar in the branch, as many officers considered it a major step backward, and protests appeared in the Field Artillery Journal.23 Snow defended his position in an article appearing in the Journal at the end of 1919 by tying it to the basic American tactical doctrine of open warfare, which the army itself was developing as the basis for its conduct in any future war.24 And since Snow, as chief, controlled
the Field Artillery School and the *Field Artillery Journal*, his view prevailed. The opposition fell off within a year as the branch united around observed fire.

Of the three long-term goals of the field artillery, the one that was the focus of greatest attention was the development of modern materiel. For a number of years after the world war, there was nothing that united the officers in the branch as much as the vision of finally completing the revolution in weaponry that had begun twenty years earlier. Field-artillery officers before and during the war had come to see this as the hallmark of a modern professional artillery. Yet despite this attention, little actual progress was made in the modernization of weapons.

During the entire interwar period two major factors frustrated the efforts to modernize artillery weapons development. One was severe budget restraints. The other was the huge inventory of artillery materiel left over from the war. This surplus impeded the effort to develop new weapons in a variety of ways. While the surplus inventory was not as well balanced between light, medium, and heavy ordnance as the field artillery would have liked, it was still available in a quantity necessary to supply a large-sized army. Thus, as far as the chief of field artillery was concerned, this meant that resources could be directed toward research and development of new weapons rather than the acquisition of more materiel, however current. The surplus also provided a means for at least a moderate modernization by tinkering with existing materiel. On the other hand, and more ominously, the surplus reduced any sense of urgency in the government regarding funding weapons development.

Following the model recommended by the postwar boards, with specifications for both practical and ideal weapons, development efforts proceeded along two lines. One was a pragmatic modification of existing weapons to make them suitable to deal with short-term emergencies in the immediate future. The other was to begin working on the ideal weapons specified by the boards under the assumption that these would come into use in the event of a major long-term emergency. The latter trend got the most attention in the branch, leading to a tendency to equate progress in materiel development with progress toward realizing the ideals.

In its efforts to modernize its weapons, the field artillery moved in two general directions: updating the guns and howitzers themselves and motorizing their transportation, which initially meant replacing horses with trucks and tractors but later also referred to the development of self-propelled artillery. Of the two, the effort to modernize current weapons was of far greater interest in the branch. Field-artillery weapons were generally classified as either heavy, medium, or light. Heavy and medium guns and howitzers were usually assigned to
either corps or army units and were meant to attack fortifications or to interdict lines of communications behind enemy lines. Light artillery was assigned to divisions and was used primarily for close support of infantry. In general, the branch devoted most of its attention to the development of light artillery as it faced increasing competition from the air service over missions of interdiction and bombardment of strongholds.28

During the world war, divisional artillery had been made up of 75-mm guns with straight-trajectory fire and 155-mm howitzers with arching-trajectory fire. After the war, in line with the army’s overall focus on open, mobile warfare, the field artillery decided to replace the 155-mm howitzer with a 105-mm howitzer, as soon as a satisfactory model could be developed, and to modernize the 75-mm gun. By 1926, the branch had adopted the far improved M1 75-mm gun to replace its wartime predecessor. Yet the large supply of surplus weapons and budget constraints meant that the M1 gun was never procured, and the branch was left with remodeling existing weapons. In the early 1930s the branch was able to mount the wartime 75-mm gun on a new carriage. After several tests, the field artillery found this remodeled gun acceptable, and it was put into limited production in 1936 as the M2; it remained in use well into World War II. After considerable effort, the Ordnance Department developed the long-sought 105-mm howitzer, which was to be the companion to the 75-mm gun in the division. But by then, funds were so limited that few could be produced, forcing the field artillery to fall back on the existing heavier 155-mm howitzer as the companion piece. By the late 1930s, when funds were more generally available, the Ordnance Department began developing a 105-mm howitzer that would be motor drawn. By 1940, it had developed an experimental model that went into production in 1941. Until then, however, the World War I mix of the 75-mm gun and 155-mm howitzer remained the standard for the army’s divisional artillery. Due to lack of funds, there was no greater success in the development of new medium and heavy artillery in the interwar period.

The branch was a bit more successful in its efforts to motorize traction for artillery, but, again, its progress was not nearly as great as had been hoped by the postwar boards. While lack of funds was, again, the major cause, the effort to motorize also faced considerable conservative opposition in the branch. Nearly all the controversy over motorization involved light artillery. Initially, there were concerns that tractor-type vehicles were still too unreliable and required logistic support that further complicated artillery action. In addition, the mission of light artillery was to provide close support of the infantry, which required flexible mobility, and many thought that horses were more likely to provide that than
the motorized vehicles then existing. Hence, there was a widespread feeling that the motorization of light artillery should be postponed until more reliable motor vehicles could be developed. The budget cuts of 1922 then brought all such efforts to an end for the rest of the decade.

Efforts were revived in the early 1930s chiefly due to the leadership of the new chief of field artillery, Major General Harry G. Bishop. Bishop noted that American automotive companies had made great progress in designing four-and six-wheel trucks and track-equipped tractors with cross-country abilities and highly improved reliability. At the same time, it was becoming clear that America’s horse population was declining. In 1933 Major General MacArthur, as chief of staff, committed the army to motorizing 50 percent of its field artillery. Progress in this direction was still slowed by lack of funds and the need to develop a gun carriage suitable for motorized traction. By 1936, such a carriage was developed, and the War Department began to motorize light artillery despite some continued opposition. By 1940, fifty-six of the eighty-one 75-mm gun batteries had been motorized, as were the batteries of the newly developed M2 105-mm howitzer.

As important as both the development of doctrine and the modernization of weapons were for the field artillery, it was the third goal of the branch—the creation of both a branch structure and a sense of branch identity and self-image—that was the area of greatest activity and greatest advancement. The structure of the field artillery was similar to that of other branches. Organizationally, it was headed by a branch chief, in this case the chief of field artillery and his office. The two main institutions responsible for socialization into the branch and maintaining cohesion and unity were its special service school, the Field Artillery School at Fort Sill, and the Field Artillery Journal. A Field Artillery Association also existed as the professional organ of the branch. Outside of organizations and institutions, efforts were made to build a cohesive social life and culture, which in the case of the field artillery were centered heavily on polo and other horse-related activities as well as on the cultivation of the cult of Saint Barbara discussed later.

The Office of the Chief of Field Artillery was similar to other branch chief offices. It was headed by a major general and contained nine to ten other officers. The duties of the office included responsibility for officer assignments within the branch, research into material and tactical developments in field artillery, all training related specifically to field artillery, development of new materials, and participation in war planning. The responsibilities of the office and his rank and position meant that the chief of field artillery was able to exercise an almost dominating influence within the branch. This was especially true in the early
and middle years of the 1920s when General Snow was the chief. Snow had been a colonel when the United States entered the world war. During the war he took charge of reestablishing the School of Fire at Fort Sill and expanded it rapidly. His success led to his being named chief of field artillery, an emergency office created at the beginning of 1918 to deal with the confusion in matters related to artillery prevailing in the War Department and General Staff. Snow was a proud and dominating figure who had no tolerance for either incompetence or dissent. He was a superb organizer and a tenacious combatant in interbranch struggles. Snow also tended to regard the field artillery as a personal domain and was seen within the branch as the virtual father of the service.

Along with the other major combat branches, the field artillery had a professional journal, the *Field Artillery Journal*. It was begun in 1910 as part of the efforts of officers to create a branch structure after the split with the coast artillery in 1907. The first few years of the *Journal*’s life were precarious, but with America’s entry into the world war and the explosive expansion of the field artillery, the *Journal* began to thrive. Like the other service periodicals, the *Field Artillery Journal* published articles related to technical and tactical developments and issues of professional interest to artillery officers. But it tried to widen its appeal by including pictures, articles of broader interest, and news items of interest to those officers, including a significant amount of coverage of polo activities within the branch. The *Journal* was published by the United States Field Artillery Association, a voluntary professional organization with its own set of officers. The chief of field artillery, to be sure, had some control over its contents, but a knowledgeable foreign observer was impressed with the openness of the *Journal* and its willingness to publish contrasting opinions on current and controversial topics. The efforts made to solicit articles and its willingness to publish contrasting views indicates that, within limits, it tried to serve as a venue in which professional dialogues within the branch could take place. Overall, the *Journal* enjoyed widespread influence and support within the branch and among National Guard and Organized Reserve officers.

Yet as was also the case with the other combat branches, the most important institution within the field artillery in terms of socializing officers into the branch and developing and maintaining cohesion and unity was its special service school, the Field Artillery School at Fort Sill. At the beginning of the twentieth century, as field artillery began to professionalize, Fort Sill, which offered a large area for firing and maneuver, began to become a center of activity. In 1905, a field-artillery regiment was stationed there to carry out experiments with newly developed guns and to develop tactics. In 1908, after the separation of
the field artillery from the coast artillery, officials decided that to unify doctrine and practice, field-artillery officers should be trained in a single school rather than in the various regiments. An officer was sent to France to study artillery training there, and with the advice of several French officers, he helped establish the School of Fire at Fort Sill in 1911.

The School of Fire, along with most other army schools, was closed during the troubles on the Mexican border in 1916. It reopened in July 1917 after U.S. entry into the world war. Under the command of the energetic Colonel Snow, the school rapidly expanded until it was pushing two hundred prospective battery officers and one hundred prospective artillery observers through a twelve-week course, with a new class starting every week. Snow also initiated a building boom at Fort Sill, including a main classroom building modestly named Snow Hall. Even these structures, most characterized by cheap frame construction, failed to alleviate the crowded conditions characteristic of Fort Sill for a long period of time. The wartime School of Fire was continued after the armistice for several more months, although with a rapidly dwindling number of students.36

By 1919, plans were almost complete for the creation of a new artillery school based on the perceived needs of the field artillery in the postwar era. And even though it opened less than three weeks after the wartime School of Fire had graduated its last students, the educational program adopted was vastly different. From the beginning, it was clear that the major objective of the school would be to build a new corps of field-artillery officers who would be united by adherence to a common tactical doctrine, a common professional self-image, and a common vision of field artillery as a technically complex and highly professional organization.37 In developing its program to achieve this objective, the field artillery was happy to follow the army’s overall original educational program, in which new officers were introduced to the military profession in the basic course and later in their careers taught the more complex tactical and material techniques of their branch in two more advanced courses.

Initially, the most important of the courses taught at the new Field Artillery School was the basic course. Snow also saw it as the major opportunity for him to shape the development of the branch and its officers. He valued the basic course chiefly because it would replace older garrison schools, which he saw as inefficient and fragmented in their educational programs, since each was controlled by the regimental commander. The basic course, in contrast, was to be under the control of the chief of field artillery and would follow a curriculum developed by his office.38 The initial cohesion created in the basic course would then be reinforced in the battery officers’ course, which was to “disseminate throughout the
service a unified doctrine for the handling of small units and the best methods for the instruction of such units.”39 A captain’s year in this course was followed by a year with troops to allow him to assimilate the common doctrines through practice to the degree that he “learned to become an expert in his . . . profession.”40 All of this was followed later with the advanced course.

The two years after the opening of the Field Artillery School was a hectic formative period in which the principal features of its educational program were established and the major problems facing it manifested in sometimes severe forms. One of these was that the three courses carrying out the branch program were physically separated. The one-year basic course was offered at Camp Knox, Kentucky; the battery officers’ course was offered at Fort Sill; while the advanced course was offered at Fort Bragg, North Carolina.

The school was also plagued with infrastructure problems, the most crucial of which was buildings for housing and classroom instruction. In each of the school areas these were inadequate in size, of poor and deteriorating quality, and scattered so that none of the separate courses had a real campus of any sort. At Fort Sill many buildings deemed “Unsuitable for Officer Housing” were still used for student officer housing for years.41

During this period, both the curriculum and the school year were defined. It was initially decided that the basic and the battery officers’ courses would run for a year, from January to December. But within a year this was changed to a ten-month program running from September to June. This new schedule not only conformed to the rhythms of army life, with summers devoted to training civilian components, but also allowed for the more theoretical portions of the program to be offered in the fall and winter, leaving the warmer spring months open for field applications.42 At the same time, the basic curriculum for the courses was established. While this underwent modification during the next two decades, the basic concept and forms never changed. All programs and faculties were divided into four sections—tactics, materiel, gunnery, and equitation—with equitation given only half the attention devoted to each of the others.43 And, as was true in other branch schools, a balance was maintained between theoretical instruction and hands-on training, favoring the latter as much as possible.44

At the same time, the curriculum reflected some of the current strains and developments within field artillery. The initial division between the “trench warfare” school and its “open warfare” counterpart was reflected in the first few years of the school as well, with instruction provided reflecting both views. Over a relatively short time, however, open-warfare doctrines were given increasingly
greater exposure until they became the established orthodoxy. At the same time, the inclusion of a subsection of eighty-six hours on motors within the material section was indicative of early interest in motorization in the field artillery. On the other hand, while equitation was given a more modern gloss by being renamed “animal transportation,” it still represented the degree to which horsemanship was seen as one of the primary qualities of officer professionalism in the field artillery.

Along with the curriculum, the Field Artillery School quickly developed its own style and approach to teaching. While its program was grueling in terms of material to be covered and demands for precision, overall, the focus was on maximizing officer psychic comfort with the program and graduating candidates. Instructors were cautioned to base their courses on the “the slowest, not the quickest thinker.” Only 2 of the 140 student officers enrolled in the basic course in 1921 actually failed. As in the case of other branch schools, officer students were graded on how closely their solutions to problems conformed to the school solution. On the other hand, everything possible was done to relieve anxiety caused by grades. To avoid the competitive stress seen at some other schools, where a point or letter-grade system encouraged “fighting for tenths,” work at Fort Sill was graded only as satisfactory or unsatisfactory. The only final grades in a course were “graduate” or “non-graduate.” Instructors were well respected for both the depth of their knowledge and the consideration given to students. Despite this, the curriculum was so packed with material that students often came away impressed more with a sense of their own ignorance rather than a sense of accomplishment. Perhaps for this reason, along with others such as the incredible inadequacy of housing, the Fort Sill experience may not have generated the same degree of enthusiasm among students and graduates that was seen at Fort Benning or even at the Cavalry School at Fort Riley, Kansas.

As was the case with the other special service schools, the formative period for the Field Artillery School came to an end in 1922, with the reforms undertaken as a result of the McGlachlin Board. For the field artillery, these wrought two unwelcome changes: the elimination of the basic course and the consolidation of all courses at Fort Sill. Snow opposed both vigorously. The end of the basic course meant that the training of new officers was left to troop schools, which were seen as reincarnations of the old garrison schools. Snow also deduced that consolidation of the Field Artillery School at Fort Sill would mean a contraction of school activities, whereas he was seeking an expansion.

At the same time, the Field Artillery School sought to make itself the educational and even intellectual center for the branch. Its staff members developed
correspondence courses for National Guard and Organized Reserve officers. The school later published a “mailing list,” providing graduates with additional problems as refreshers, and developed training regulations for the branch. All this activity was carried out by officer instructors without the benefit of extra resources or even clerical support, leading to severe problems of overwork. On the other hand, there was little change in the curriculum, especially in regard to issues of modernization, although some tinkering did occur. More interest in radio communication entered into instruction over time, while an advanced course in motors was set up in 1929 to create qualified instructors for corps-area schools, though it attracted few students.

During the rest of the 1920s, the school also worked to develop a sense of its own institutional identity and its role and position within the branch. A patch was designed linking it with the cult of Saint Barbara, which was becoming more deeply imbedded in the organizational culture within the field artillery. The school was also firmly committed to the horse culture so dominant in the branch. A riding hall was built, containing an audience gallery that could seat two hundred. Fort Sill also sponsored a fox hunt. At the same time, the school created an advanced equitation course to improve the level of horsemanship within the branch.

Finally, the issue of highly inadequate facilities for officer quarters and for instruction continued to worsen during the 1920s. Most of the facilities available were wartime emergency wood-and-beaverboard construction. Woefully inadequate to begin with, they rapidly deteriorated further over time. More important, they were highly susceptible to fire. Between 1921 and 1929, nineteen major fires occurred at Fort Sill. These seriously aggravated the already severe problems with facilities to the point that, in 1930, a board was convened to study the possibility of moving the school to another post, such as Fort Bragg. Ultimately, it recommended against a move and suggested instead that a major building program be instituted to put the school in more-modern and more-fireproof facilities. In this way, and others, the school was poised in 1930 to enter a new era in its history.

During the first five years of the 1930s, there was a growing sense that the Field Artillery School was entering a more positive and progressive chapter in its development. The most visible evidence of this was an accelerated building boom. But it was also seen in the leading role the school was taking in the modernization of the field artillery, which accelerated during the first half of the decade, and in the increased authority it enjoyed within the branch. An ambitious $1 million building program was drawn up and gradually implemented, in part with an infusion of Public Works Administration money. As a result,
by 1935, much of the housing crisis at Fort Sill had been alleviated. The school also increased its interest and influence within the branch. It played an active role in the motorization program that Major General Bishop had prioritized, carrying out tests on other equipment as well, including radios, self-propelled guns, antitank guns, and other weapons. Finally, through its work in developing correspondence courses, texts for regular school courses, and the *Field Artillery Manual*, the school began to establish itself as the source and authority on field-artillery doctrine. At the same time, the onset of the Depression was responsible for several major disruptions of routine. In 1933 Fort Sill was made a regional headquarters for the Civilian Conservation Corps, and its demands on the school’s officer personnel became so severe that the school had to close early in 1933. Moreover, budget constrictions forced all branches to curtail school activities by reducing enrollments by one-half, which meant merging the battery officers’ course and the advanced courses beginning with the fall term of 1934.

The trends established at the Field Artillery School in the first half of the 1930s continued into the decade’s second half, although the turbulence that marked the earlier years subsided. The only significant shift during this period was that the school became a major force in the motorization of the branch. It not only carried out research on motors but also increasingly became an advocate of more thorough motorization.

Overall, in the interwar period the Field Artillery School had the twin objective of building the field artillery into a cohesive branch and to imbue its officers with a common doctrine reflecting the state of military art at the time. The school was, apparently, quite successful in achieving both goals. Like the other branch schools, it sought to weld the officers of the field artillery into a cohesive corporate body by providing a set of common experiences and teaching not only a single unified doctrine but also that success resided only within that system. Over time the school expanded its influence by means of its texts and extension courses, which brought the doctrine to officers beyond the school, including those in the National Guard and Organized Reserve. Finally, it represented the branch to the outside world, especially in the polo games and horse shows that remained central to American elites in the 1920s and 1930s. At the same time, the school remained highly aware of developments in field artillery throughout the world even if the branch was limited in its ability to keep U.S. field artillery in line with those advances.

On the other hand, the Field Artillery School, like the other U.S. special and general service schools, created a conservative outlook among the attending officers. By teaching orthodoxy, it inhibited imaginative or original thought, a
tendency reinforced by the emphasis given to practical training and application of theory. Unlike the infantry and the cavalry, which had to deal with a revolutionary weapons system in the tank and with a revolutionary doctrine in the mechanized force, the field artillery and its school faced no such challenges to its comfortably evolutionary vision of change. But if it is true that the revolution in artillery weapons had already occurred and that its critical mission was in building a cohesive branch out of the agglomeration of officers in the field artillery at the end of the world war, then the school’s focus on orthodoxy and its evolutionary approach to change may have been the best policy.

Branch building went on in the field artillery outside of its official organizations as well. Some of this extracurricular activity was encouraged and guided by branch leadership, but much of it came as a grassroots effort from among the officers themselves. All of it was aimed chiefly at creating a distinct branch culture that would not only provide a near-tangible sense of existence for the branch but also define for officers what it meant to be a “good field artilleryman.” The strictly professional side of this effort came, in part, from the Field Artillery Association, a voluntary organization made up chiefly of field-artillery officers in the Regular Army, National Guard, and Organized Reserve. Created in 1910 in the wake of the Artillery Act of 1907, it not only provided the recently orphaned field-artillery units with a sense of their own branch existence but also was a deliberate effort to replace the prevailing “battery spirit” with a more professional branch spirit. It was modeled along lines of a professional association, with its major function being the publication of the Field Artillery Journal. During the interwar period, the Field Artillery Association held annual meetings at which it sponsored professional research.

The effort to create a branch culture also included well-developed informal elements. One part of this was an expanding collection of songs. Branch songs were an important element in defining a sense of professional identity and character for the field artillery as well as providing officers and enlisted men with a sense of community. The songs were chiefly devoted to describing work and life in the field artillery, characterizing the battery officer, and providing a branch ethos. The “Caisson Song,” by far the best known of these, was composed in 1908, the year after field artillery came into existence, and extolled the toil and perseverance of artillerymen in keeping the caissons “rolling along.” Overall, field-artillery officers described themselves in their songs as vigorously masculine, fun loving as well as martial, and tightly knit comrades.

While all the other combat branches also had their professional organizations and songs, the field artillery was unique in its possession of a patron saint.
The cult of Saint Barbara was not just an oddity but a tradition that played an increasingly important role in the development of the professional self-image of the field artillery. The association of Saint Barbara with artillery developed in Europe after the fifteenth century. American field artillery officers picked it up in France during the world war and brought it back to the United States, where the tradition spread quickly among field-artillery officers. Her position became officially recognized by the branch with the inclusion of bolts of lightning in the new seal created for the Field Artillery School. In 1934 a miniature replica of a fifteenth-century print of Saint Barbara began to appear on the frontispiece of the Field Artillery Journal. By the late 1930s, December 4 was celebrated by field-artillery groups as Saint Barbara's Day. Even though the cultivation of this tradition within field artillery was only a minor activity, it had some significance. Mildly encouraged by branch leadership, it was, like the field-artillery songs, an activity that developed and spread at the grassroots level and served as a source of bonding and common professional identification.

But the basic and central element of field-artillery branch culture as it emerged in the 1920s and 1930s was the horse. The horse was at least as central to the culture and social life of the field artillery as it was to that of any other combat branch, including the cavalry. Even though horseback riding had only a small and diminishing role in anticipated combat activities, horsemanship was always clearly seen as one of the critical benchmarks of an officer’s military professionalism. Horse-related activities dominated field-artillery social life. While horse shows were an important activity in the branch, the most important horse-related activity was polo. This game was highly popular among the officers and strongly encouraged by both army and branch leadership. As hard pressed as it was for funds, the field artillery still poured resources into polo in order to upgrade its string of ponies and to free up its officers to practice and play polo on a semiprofessional basis. There were several reasons for the sport’s popularity. First, as was the case with the horse shows, polo was an upper-class activity in the United States, and participation allowed officers a chance for access to and social interaction with elements of society from which they would otherwise be closed off. More important, polo was popular because of its opportunities for competition. As was the case with the cavalry, the field artillery was deeply involved in competitive polo in tournaments at the regional, national, and even international level. The results of these tournaments were reported at length in a special section in every issue of the Field Artillery Journal. Field-artillery teams were increasingly successful, allowing officers to take pride in their branch and in the masculine attributes of professionalism celebrated in the game.
Overall, the field artillery began the interwar period amid two revolutions, one in material and tactics and the other in the professionalization of officers and its restructuring into a combat branch. Of the two revolutions, by 1919, that in material and tactics was seemingly near the end of its twenty-year trajectory, leaving field artillery around the world in an apparently stabilized situation. Much change was yet to come, especially in terms of motorization of units, yet it still seemed to amount to little more than tinkering, especially with budgetary constraints in the United States severely restricting widespread research or the procurement of more modern weapons. This tinkering created some interest in the branch, but it did not arouse such passions as created by, for example, mechanization in the cavalry and infantry or the introduction of antiaircraft artillery in the coast artillery.

On the other hand, the revolutionary professionalization of officers and the development of a branch structure and culture for field artillery was still in the middle of its trajectory at the end of the world war. By 1919, the branch was still only a dozen years removed from its separation from the coast artillery, and its institutions and means of socialization were less than ten years old. The branch lacked traditions and a cadre of officers with long experience and authority to give it identity and guide its development. Hence, many officers, both in leadership positions and in the rank and file, may have tended to see matters of branch formation as more important than further refinements in matters of material and tactics.

Hence, while field artillery saw relatively little change in weapons design and usage, it underwent major changes in branch structure, with the foundation of a school system that quickly unified the branch behind a common tactical doctrine; the rise of institutions such as the Field Artillery Association and the *Field Artillery Journal*, which gave tangibility to the existence of the branch and to the professionalism of its officers; and finally, the rise of a set of common traditions and activities that helped define the professional character of its officers. As a result, regardless of the quality of the weapons with which it entered the World War II, the field artillery entered that struggle with a solid organization made up of officers with common outlooks and the capacity to think and work together.