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**WINFIELD SCOTT'S MEXICO CITY OPERATION:
THE GENESIS OF AMERICAN OPERATIONAL ART?**

**A Monograph
by
Major James A. Cope
Infantry**



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**School of Advanced Military Studies
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As a result of this analysis, it is possible to conclude that the Mexican War has elements of emerging operational art and is the genesis of American operational art. Technological limitations at the time of the largely forgotten Mexican War prevent the War from being as complete an example of emerging operational art as the American Civil War.

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AMERICAN OPERATIONAL ART?

by

Major James A. Cope
Infantry

School of Advanced Military Studies
U.S. Army Command and General Staff College
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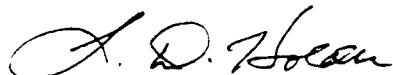
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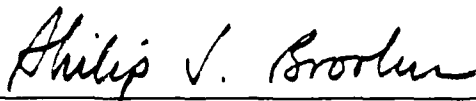
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ABSTRACT

WINFIELD SCOTT'S MEXICO CITY OPERATION: THE GENESIS OF AMERICAN OPERATIONAL ART? by MAJ James A. Cope, USA, 53 pages.

This monograph addresses the beginning of the American version of operational art. Winfield Scott's participation in the Mexican War is analyzed to determine whether his activity constitutes the genesis of American operational art. The Mexican War has many of the characteristic features of operational art: joint operations, distinct lines of operation, multiple field armies, operational intelligence, deep strikes, acceptance of risk, and distributed operations. The Mexican War is assessed using the definitions of operational art in FM 100-5 and emerging operational art in Professor James Schneider's article, "The Loose Marble--and the Origins of Operational Art." The war is analyzed on two levels: the overall planning and execution and the specifics of Scott's Mexico City Operation. Schneider's eleven characteristics of emerging operational art are the theoretical bases of this analysis.

The American Civil War is briefly considered for the part that Winfield Scott actively played in planning the War. The careers of Generals Grant and Lee are surveyed for the influence of Winfield Scott. Similarities to the Mexican War are discovered. The sophisticated activities in the Mexican War are shown to be the precursors of similar activities in the Civil War.

As a result of this analysis, it is possible to conclude that the Mexican War has elements of emerging operational art and is the genesis of American operational art. Technological limitations at the time of the largely forgotten Mexican War prevent the War from being as complete an example of emerging operational art as the American Civil War.

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INTRODUCTION

The campaigns of Lieutenant General Ulysses S. Grant during the American Civil War have suggested a peculiarly American beginning to operational art.(1) Reflection on the accomplishments of General Grant generates the question: "Are Grant's accomplishments the result of dominating genius or the result of previous experience?" Grant himself, a participant in Lieutenant General Winfield Scott's 1847 campaign in Mexico, provides a clue as he considers the campaign in retrospective analysis: "Both the strategy and tactics displayed by General Scott in these various engagements of the 20th of August, 1847, were faultless as I look upon them now, after the lapse of so many years."(2) Lieutenant General Winfield Scott's Mexican Campaign of 1847 was unprecedented in American military history. This campaign, along with Scott's many other contributions during his military career, provided the seeds for emerging American operational art.

Lieutenant General Winfield Scott was a serving general officer from 1814 until 1861. During the last twenty years of his career he was the commanding general of the United States Army. As the United States' senior soldier during the Mexican War General Scott took the field as an active commander. His thorough personal and professional

preparations for command led to a professional army that was an instrument of his creation.

As early as 1804-1805 General Scott was reading de Jomini's commentaries on French military operations of the Republic and early Empire. In 1810 after being court-martialed and suspended from the army for twelve months for slandering General Wilkinson over Wilkinson's part in the Aaron Burr affair, Scott spent his year of unforeseen sabbatical at the home of his friend, Benjamin Watkins Leigh, where he voraciously attacked Leigh's extensive library rich in military histories, biographies, and military theory.(3) He so appreciated the great military works that on his campaigns during the War of 1812 Scott took a travelling military library which included de Jomini's Traité des Grandes Opérations Militaires and Historie Critique et Militaire des Campagnes de la Révolution.(4)

In 1815 Scott, a master tactician, was sent on a tour of Europe by the Secretary of War to observe and study the tactics of the French, English and various German armies. In 1829 he made a similar trip.(5) He was president of a board in 1814-15 that adopted for the Army a system of tactics that was essentially the one he had devised as a brigadier in 1814. In 1821 he wrote "General Regulations of the Army," the basis for all further regulations. During 1825-26 he chaired the boards that reviewed the 1815

Infantry tactics, existing tactics for cavalry, existing tactics for artillery; and, for the first time he proposed an organization and tactics for the militias(6). In 1835 he published his three-volume work, Infantry Tactics: or, Rules for the Exercise and Manoeuvres of the United States Infantry, which covered everything from the individual soldier's tasks and drills for musicians to how to form and fight an army corps of two divisions.(7). In 1845 he wrote an artillery manual that synthesized French and British artillery tactics and established the concept of "rlying artillery" which was tactically decisive in the Mexican War(8).

Prior to the Mexican War Scott commanded everything from a brigade to a field army. He had even acted as a diplomat in several sensitive negotiations with foreign powers and in internal problems with South Carolina over the ordinance of nullification.(9) At the onset of the Mexican War General Scott was prepared to plan and conduct major operations incorporating many of the characteristics of operational art.

Major operations, a feature of the operational level of war, have been the subject of intense study in the U. S. Army. They are planned and executed using operational art. The United States Army's Field Manual 100-5, Operations defines operational art as the "employment of military forces to attain strategic goals in a theater of war or

theater of operations through the design, organization, and conduct of campaigns and major operations."(10) FM 100-5 goes on to provide further defining characteristics:

"Operational art ... involves fundamental decisions about when and where to fight and whether to accept or decline battle."(11)

"No particular echelon of command is solely or uniquely concerned with operational art...."(12)

"Operational art requires broad vision, the ability to anticipate, a careful understanding of the relationship of means to ends, and effective joint and combined cooperation."(13)

FM 100-5 adds three essential questions the commander must answer in order for him to execute operational art:

"(1) What military condition must be produced in the theater of war or operations to achieve the strategic goal?

(2) What sequence of actions is most likely to produce that condition?

(3) How should the resources of the force be applied to accomplish that sequence of actions?"(14)

In his article "The Loose Marble -- and the Origins of Operational Art," Professor James Schneider of the School of Advanced Military Studies, US Army Command and General Staff College, Fort Leavenworth, Kansas, has added further intellectual rigor to the definition of operational art. Professor Schneider contends that:

"The hallmark of operational art is the integration of temporally and spatially

distributed operations into one coherent whole."(15)

"These two particular characteristics --simultaneous and successive operations--are in fact the heart of operational art. The first characteristic was the lateral distribution of forces across a generally continuous front in the theater of operations. This led to the need to synchronize the simultaneous but distributed actions of forces across the breadth of a theater. The second characteristic of operational art, evolving virtually concurrently with the first one, was the deepening of the theater of operations. This led to the conduct of successive operations through the depth of the entire theater of operations."(16)

Professor Schneider further suggests that emerging operational art has distinct characteristics:

- "- The employment of several independent field armies distributed in the same theater of operations
- The employment of quasi-army group headquarters to control them
- A logistical structure to support distributed operations
- The integrated design of a distributed campaign plan
- The strategic employment of cavalry
- The deep strike
- The conduct of joint operations
- The execution of distributed free maneuver
- The continuous front
- The distributed battlefield
- The exercise of field command by officers of operational vision."(17)

Schneider's description of operational art provides both definable characteristics and a framework with which to look at the historical record for evidence of operational art prior to the machine age.

Winfield Scott's operations of 1847 against Mexico City contain elements of operational art. This monograph will examine Scott's campaign through the dual lenses of FM 100-5 and Professor Schneider's article and argue that Scott's 1847 campaign was the beginning of American operational art, albeit in a primitive form. Scott's influences on General Ulysses S. Grant and the American Civil War will also be considered. What were Scott's contributions to emerging American operational art? Could it be that he, not Grant (as Schneider contends) is the true original practitioner of American operational art?

Lieutenant General Winfield Scott

Operational art requires a general of vision. In the introduction, General Scott's career outline shows that he was technically ready and had prepared himself intellectually for senior command. At the start of the Mexican War Scott had been commanding general commanding of the army for five years. Scott was an activist commanding general and he had been heavily involved in the tactics and training of both the regulars and the militias. He instituted summer maneuvers for the regulars where units were gathered from their scattered posts and exercised as regiments.(18) In the process "He had inculcated in the whole army a fierce pride in itself and its standards."(19) While preparing the Army, he also prepared himself.

"Above all, he had studied incessantly -- reading, digesting, evaluating every book on military theory and history on which he could lay his hands, preparing himself for the day when he would again be called to command American troops against a foreign foe."(20)

Scott's skills as a commander were varied. He was involved with all facets of command: logistics, intelligence and psychological warfare.(21) Scott paid attention to detail with the ability to attend to all matters in proportion to their relative importance.(22) Scott also knew his own limitations. "Among the reasons for

his success was his astuteness in gathering around him advisers and helpers men with brains who had received specialized training that he lacked." (23) Scott was also capable of dealing with what resources his government provided. For political reasons President Polk never sent Scott either the full logistical or manpower support promised. A Whig, Scott was a political threat to Polk, particularly since the Whigs had talked about him as a potential presidential candidate.

Scott also understood the weaknesses of others. He recounts in his autobiography that he knew General Taylor was not particularly learned or good at staff work so he, Scott, contrived to send him a chief of staff whose strengths would compensate for Taylor's weaknesses. (24) Although Scott expected his subordinates to be able to carry out his orders. He realized that at times his personal intervention was necessary. During the conduct of the Mexican Campaign his timely arrival at Contreras and Churubusco saved his army further unnecessary casualties.

In his memoirs, General Grant described Scott as difficult to be around, yet an outstanding soldier. Grant thought that Scott saw too much of the battlefield through the eyes of his engineers (what Martin van Creveld has called directed telescopes) and should have been present on the battlefield more himself. Yet, as previously stated, he saved the day at Contreras and Churubusco. Grant goes on to

say that while Taylor gave clear concise verbal orders, Scott communicated his orders superbly in writing. These orders were the result of careful reconnaissances and careful planning. They were precise (a characteristic of Grant's own orders in the Civil War). Grant said, "...the chief (Scott) was able to give his orders to his various subordinates with all the precision he could use on an ordinary march." (25)

Scott possessed the quality Clausewitz called "coup d'oeil" (The ability to see immediately with one's mind's eye the answer on the battlefield which should ordinarily take weeks of careful study to discern.) As a young man, he had demonstrated this quality at Chippewa and Lundy's Lane in the War of 1812 and later at Cerro Gordo and Churubusco in the Mexican War.

Scott displayed strategic vision throughout his career. Scott recognized that in order to defeat Mexico, an attack on the capital which would cause the Mexicans to fight was necessary and that the outcome of that battle would be decisive. Other examples of his strategic vision were his Civil War Anaconda Plan and his admonition that the war would take several years and 300,000 men to win. J. F. C. Fuller provides further evidence:

"Of the Southern soldiers General Winfield Scott said: They 'have elan, courage, woodcraft, consummate horsemanship, endurance of pain equal to the Indians, but they will not submit to

discipline. They will not take care of things or husband their resources. Where they are there is waste and destruction. If it could be done by one wild, desperate dash they would do it, but they cannot stand the waiting...Men of the North on the other hand can wait; they can bear discipline; they can endure forever. Losses in battle are nothing to them. They will fight to the bitter end.'

These words were spoken in February, 1862."(26)

As a military governor he was uniquely qualified to deal in the political realm with conquered people. He participated in the invasion of Canada in the War of 1812. In 1839 he had performed sensitive negotiations with Britain over the Maine border and proved himself to be a superior diplomat. During his tenure as military governor of Mexico, he curbed his troops, maintained good relations with the church, destroyed bandit bands, and provided a fair administration. He even resurrected portions of the local Mexican economy by contracting for supplies for his army. His success was such that when President Polk, in a blatantly political move recalled him to face spurious charges, a delegation of the leading citizens of Mexico City offered him a 1.5 million dollar bonus to stay as the dictator of Mexico.(27)

The relative excellence of Scott as an expeditionary force commander is best expressed by Brigadier General George E. Lynch.

"In my mind's eye I can now envisage Winfield Scott, sitting indomitable at the gates of the

Valley of Mexico, while whole brigades of his short-term soldiers departed for home, leaving him only a gallant handful with which to 'conquer a peace' for the coldly hostile Mr. Polk. I wonder if even Napoleon, or Wellington, or Marlborough, under such circumstances, could have matched the inspired genius that Scott displayed." (28)

The Mexican War was the arena where Scott proved himself a commander of vision, which is a characteristic of a commander capable of operational art.

THE MEXICAN WAR

For the purpose of ascertaining whether or not the Mexican War was the scene for emerging operational art, it is important to determine the strategy chosen to prosecute the war and the tactical actions devised to implement that strategy. The historical record is not clear about who devised the strategy that defeated Mexico. The two possibilities are President James K. Polk and General Scott. President Polk seems to have had an innate strategic sense (not unlike President Lincoln) in realizing that the opportunities in the war with Mexico required at least a two-pronged attack, one prong attacking California and one prong across the Rio Grande. However, Scott in his memoirs suggests that he proposed this strategy. He further suggests that his plan to link the attack in northern Mexico with an amphibious operation aimed at Mexico City was accepted as the basis for theater operational directions.(29)

The war against Mexico was organized into two theaters. (See Map 1) General Kearney, commanding a theater consisting of California and the New Mexico Territory (Arizona and New Mexico), marched overland from Fort Leavenworth by way of Santa Fe to attack California. Meanwhile Commodore Stockton, with a small naval squadron,

seized the coast and major ports. The second theater, eastern Mexico, was originally to have been conquered by General Taylor attacking south from Texas. Taylor's attack was to be supplemented by two other supporting attacks, Doniphan attacking south from Santa Fe and Wool moving south from San Antonio and attacking to Monterrey. Heavy casualties, continued Mexican resistance, the distance to Mexico City (over 1,000 miles), and the rising political fortunes of General Taylor (a Whig) caused President Polk (a Democrat) to realize that he needed to open a second front within this theater. The second front would not only aid militarily, but would also diffuse some of Taylor's popularity. General Scott's proposal for an amphibious operation came to Polk's mind. President Polk originally wanted Taylor and Scott to meet at Tampico and head inland to Mexico City to produce a combined overland attack with an amphibious landing; but map study, reconnaissance, and spies indicated that this plan was impractical due to a lack of roads between Tampico and Mexico City. Instead, General Scott's personally preferred Vera Cruz operation became the strategic solution to drive Mexico to the peace table. The implemented plan has come to be regarded as "the greatest amphibious operation in American Warfare up to the time of World War II." (30)

Vera Cruz is a seaport on the east coast of Mexico which connects the capital, Mexico City, with the sea by way

of a 260-mile road known as the National Highway. The formidable city had a major fortress, San Juan de Ulloa, with 128 guns and over 1,000 soldiers guarding the harbor. The city itself had nine forts with connecting curtain walls and approximately 2,500 to 3,000 soldiers. About 250 cannons, some of English origin, defended the city proper. In addition to the walls there were ditches filled with prickly pear, and troux des loups, a kind of Mexican War landmine consisting of a conical hole with a sharpened stake designed to impale its victim.(31)(32) The troux des loups were similar to punji sticks, but set out on a grander scale.

Why attack this formidable city? Scott's analysis indicated that seizing Vera Cruz and using it as a base of operations was vital if Mexico City were to be challenged. He reasoned that the Mexicans would fight for their capital and he could gain a peace by defeating their army and seizing Mexico City. Clausewitz's definition of the key to the country fits Vera Cruz. Clausewitz wrote:

"If there is an area without the possession of which one cannot risk an advance into enemy territory, it may correctly be designated as the key to the country."(33)

Further he says,

"...it is obvious that in each country there are some points of exceptional importance, where a number of roads converge, where it is easy to stockpile supplies, whence one can conveniently move in several directions; in short, whose

possession satisfies a number of needs and offers a number of advantages." (34)

To determine how best to seize Vera Cruz, Scott employed spies who reported either to him, Commodore Conner (the naval squadron commander), or to an officer representing them. (35) By good fortune on 6 March 1847, two days prior to the planned date of the attack, a British man-of-war sailed from Vera Cruz and furnished the American forces with newspapers from the city. From the El Locomotor newspaper Scott learned of the Mexican victory at Buena Vista followed by a Mexican retreat. More important, he learned of a revolt in Mexico City which resulted in the National Guard's refusal to march to Vera Cruz to bolster the defenses (36). Finally, Scott knew the details of the 1838 the French attack of Vera Cruz and San Juan de Ulloa under the command of Admiral Baudin and the Prince de Joinville. This attack had been observed by a young American naval officer, David G. Farragut. (37)

Because he realized that the city was too strongly fortified for a frontal assault, Scott decided upon an indirect approach that invested the city and reduced it from the landward side. He left the details of the landing, to include the selection of the assault beach, to the naval commander. In beginning the operation with logistics shortages, artillery shortages (only one-third of the siege train), and less than his full complement of soldiers,

Scott accepted significant risk. Commodore Conner's landing at Vera Cruz was classic: the boats loaded the landing force, the boats were combat loaded and advanced to the shore in waves. The landing was flawless; the operation became the model for subsequent joint operations until World War II.(38) Commodore Conner landed 8,600 troops in five hours without the loss of a single life, a feat that would be difficult to duplicate today.(39) K. Jack Bauer wrote of the joint operation:

"To Commodore Conner must go the credit for bringing off an extremely difficult and complicated operation: It was he who selected the landing place and the method of transporting the troops to the debarkation point, and he handled the details of the landing. General Scott on the other hand, deserves credit for conceiving and planning by far the most difficult operation that American troops had faced up to that time: moreover, he undertook to land on a hostile shore before most of his logistic support had reached him and with fewer than the number of troops he considered minimal."(40)

The Mexicans chose not to oppose the landing. Since a landing force is at its most vulnerable in the act of landing, this was a mistake.

The siege itself was a joint operation. The Army invested the city, dug siege lines, and bombarded the city from the landward side as the Navy bombarded the city from the seaward side. This use of naval bombardment constitutes rudimentary operational fires because of its impact on the close battle over time. Scott and Conner arranged a system

of signal flags which allowed them to communicate from shore to ship during the siege.(41) Because the Army siege guns proved inadequate, the land bombardment became a joint operation with six naval guns provided on the condition that the Navy crew them.(42) After American guns had hammered holes in the walls of the city and set numerous fires within, the city which many felt had the strongest fortifications in North America capitulated on 27 March 1847.(43)

Haste now entered Scott's operations. Yellow fever season was fast approaching and he needed to get inland out of yellow fever country to the healthy central plateau. Also, the enlistments of seven regiments of volunteers, about 4,000 men, were due to expire prior to yellow fever season. Therefore, Scott headed inland with Jalapa, about 75 miles inland on the National Highway to Mexico City, as his first objective. (See Map 2)

Sixty-six miles inland, in the vicinity of the village of Cerro Gordo, the Mexican commander, Santa Anna (who was both head of state and field commander of the army), blocked the road with around 20,000 men. By positioning his men in mutually supporting locations on the high ground that dominated the National Highway, he established an excellent defensive position. Scott needed the road in order to bring his trains and his artillery to Mexico City. At this point, Scott showed his tendency to use the indirect approach and

the envelopment. He had his engineers, particularly CPT Lee and LT Beauregard, reconnoiter a trail that paralleled the highway and went around the Mexican right flank. Based on their reconnaissance, Scott sent a strong flanking force of infantry and artillery around the Mexican flank. His plan of battle called for a synchronized attack with a frontal holding attack diverting Mexican attention from their own flanks and a flanking force attacking the Mexican rear. Scott achieved a decisive victory despite the early attack by the flanking units. This maneuver, despite its premature attack, had decisive operational consequences: the Mexican Army ceased to exist as a coherent fighting force. The Mexicans were able to extricate a few units from the trap. The American Dragoons pursued the fleeing Mexicans for twenty miles, the limit of endurance for their horses. The rout was so complete that Santa Anna's wooden leg was captured along with his baggage. The road to Mexico City was open. Scott advanced as far as Puebla and halted for an operational pause.(44)

The condition of his army forced Scott to halt. The volunteer regiments he had hoped to convince to extend their term of enlistment insisted on discharge and transportation home at the end of their term of service. As the yellow fever season was fast approaching, Scott sent the volunteers back to Vera Cruz early. His army then numbered just over 7,000. During the four-month pause at Puebla some supplies

and reinforcements reached the army, but otherwise the rich land around Puebla combined with local contracts provided adequate food and some replacement items (See Map 2).

When the rebuilt army numbered about 11,000, Scott cut his supply lines and resumed the offensive. To cut his supply lines was generally considered by his contemporaries as an insane act. The Duke of Wellington who had avidly been following the Mexican War remarked, "That poor young man is lost. He has been carried away by his successes. He can't take the city, and he can't fall back upon his bases. He won't leave Mexico without the permission of the Mexicans." (45) Santa Anna, too, took advantage of Scott's pause and raised a new army of over 30,000.

Advancing from Puebla, Scott had to choose between the National Highway and several other routes that were longer and more difficult. The National Highway was dominated by a powerful, well-manned fortress, El Penon. Scott feinted at El Penon on several trails while selecting the southernmost to traverse. After turning the El Penon position by operational maneuver, Scott continued to advance on Mexico City. At Contreras he encountered a Mexican force (See Map 3). Without orders the lead division under General Pillow advanced to the assault. By the time Scott arrived at the battlefield, the situation was becoming serious. Scott's coup d'oeil enabled him immediately to organize a flanking movement with follow-on forces. On the second day of the

battle it was Cerro Gordo all over again: the Mexican force was defeated.(46) Scott had conducted a maneuver that almost achieved operational significance. It is only because the Mexican army was better handled at Contreras that it was not completely routed.

In order to restore the situation, Santa Anna hurried to place himself between Scott and Mexico City. Santa Anna chose to defend the strong position at Churubusco (See Map 3). Approximately 1,800 meters to the right of the extremity of the Mexican line ran a trail which led to the Mexican rear. Perhaps the victim of faulty reconnaissance, Scott acted completely out of tactical character by trying to take the position by assault. He tried no maneuver to defeat the position even though his previous maneuvers had led to one decisive battle and another almost decisive battle. As his frontal attacks were met by stiff resistance, Scott immediately sought to flank the position. After the road to the right of the Mexican position was tried and met with stiff resistance, and Scott tried to flank the Mexicans on their left. The Mexicans were not holding the lake area in strength, and this maneuver succeeded. When American troops appeared in their rear, the Mexicans broke. In spite of their loss, this was the Mexican Army's best performance to date against Scott. After Churubusco Scott agreed to an armistice with Santa Anna. He then took a second operational pause.(47)

The condition of the army required this pause. Casualties at Churubusco had been heavy (over 1,000 men). G. F. R. Henderson speculated that Scott wanted to allow the Mexicans an opportunity to end the war prior to their complete destruction.(48) Most historians agree that Scott halted because he needed to rest and refit. Operationally, he needed the pause to prepare for the final push against Mexico City, which early in the war Scott had identified as the last decisive point of his plan to defeat Mexico.

When the hostilities recommenced, Scott was about four miles southwest of Mexico City at Tacubaya. One and a half miles to the north was Molino del Rey, with the castle of Chapultepec about two miles in the same direction. As part of the Chapultepec approach, Molino del Rey was heavily garrisoned. Chapultepec was Mexico City's strongest defense. Santa Anna had declared Mexico City to be impregnable and staked his political fortunes on holding the city. At this point, Scott suffered from an intelligence failure. He received an inaccurate report that Molino del Rey was an active foundry producing cannons for the final defense of the city. For reasons that transcended tactics, Scott decided to seize Molino del Rey. The capture of Molino del Rey would directly affect the combat power of the Mexican Army. Accordingly, Scott feinted to the extreme south of the city and ordered General Worth to take Molino del Rey. The capture of Molino del Rey left only

Chapultepec to defend the city on this approach. Surrounded by lakes and marshes, Mexico City could only be entered by causeways. As part of this defense, Chapultepec could only be attacked from the south or the west.(49)

Since Chapultepec was a powerful fortress, Scott called a council of war to discuss whether to continue to attack the Mexico City on this approach. There were other causeways into the city, each protected by garitas (fortified emplacements). The swampy ground made maneuver difficult, particularly for artillery. By a sizeable majority, the council of war recommended going south. Scott vetoed their suggestion and decided to attack Chapultepec. Reduced to 7,200 men at this point, Scott could no longer afford the luxury of feints; he needed all his men concentrated for offensive operations.(50)

Scott deployed his artillery to destroy the cannons in Chapultepec by counter-battery fire. This fire was largely successful, destroying the best guns in the fortress.(51) This was consciously done prior to the assault to facilitate the immediate fight, and may be another example of operational fires within the capability of the technology of that day. Santa Anna continued to disperse his forces to cover the causeways into the city in response to previous American feints. Scott successfully stormed Chapultepec at 0530. When the fortress fell, Scott's forces continued the attack and seized a gate into the city. Mexico City fell.

and with it, Santa Anna. In six months, four of which were consumed in operational pauses, Scott had seized Vera Cruz, marched 260 miles to Mexico City, fought outnumbered at every battle other than Vera Cruz against the best army Mexico fielded in the nineteenth century, and won with an army that averaged around 10,000 men, about half of whom were untrained volunteers.(52)

Maintaining a line of communications 260 miles through enemy territory forced Scott to consider civil military operations. At the outset of the campaign President Polk felt that Scott should have at least three Spanish-speaking Catholic priests so that the peasantry would not think this an anti-Catholic war.(53) This may well be emergent PSYOPS. Scott himself tried to maintain good relations with the church and to keep the population at least neutral. To protect his line of communications, Scott held the alcalde (mayor) of the nearest town personally and financially responsible for losses to raids unless the alcalde provided the perpetrators or information concerning their whereabouts. Additionally, Scott hired the bandit (in Mexico not necessarily a less than honorable profession), Manuel Dominguez, and his band of 200 men to serve as guides, couriers, and spies. Dominguez and his men developed into an effective antiguerrilla force and helped keep communications with Vera Cruz open.(54)

To put Scott's accomplishments into perspective consider T. Harry Williams' observation: "In 1861-1863 it would take 30,000 French regulars eighteen months to reach the same objective against a less powerful Mexican Army, and en route they suffered a bad defeat at Puebla." (55) In his addendum to The Art of War on maritime expeditions, de Jomini characterizes Scott's accomplishments as a "brilliant campaign". (56) The Duke of Wellington charged young English officers to study Scott's campaign as a flawless example of daring strategy and skillful organization. (57) Wellington insisted, "His (Scott's) campaign was unsurpassed in military annals. He is the greatest living soldier." (58)

The American Civil War

Professor Schneider argues that the American Civil War witnessed the beginning of operational art for the United States Army. At the onset of the Civil War Lieutenant General Winfield Scott was the commanding general of the United States Army. At President Lincoln's request, General Scott proposed a comprehensive long-term strategy to defeat the Confederacy which became known as the Anaconda Plan. Scott was also of the opinion that a competent commander with an army of 300,000 disciplined men maintained at that level of manning could successfully defeat the Confederacy in two or three years.(59) Although President Lincoln chose not to use the Anaconda Plan for reasons of political expediency (a quick military decision was required), it is interesting to note that General Grant's ultimate winning strategy was similar to Scott's proposed strategy. It was Scott's Anaconda Plan that pointed out to Lincoln the strategic significance of the Mississippi River Valley, the need to separate Texas and its agricultural resources from the rest of the Confederacy, and the need to wage war in more than just the military arena.(60)

The general officer list in the Civil War contains the names of many officers who served as young men with Scott in Mexico. These include George McClellan, P. G. T. Beauregard, Stonewall Jackson, "Fighting" Joe Hooker, Kirby

Smith, Gustavus W. Smith, Issac Stevens, John Foster, Irwin McDowell, Winfield Scott Hancock, John Magruder, A. P. Hill, D. H. Hill, John Pope, James Longstreet, George Pickett, Dick Ewell, Albert Sidney Johnston and Joseph E. Johnston. The two most important are Robert E. Lee and Ulysses S. Grant.(61) One of Scott's biographers, Arthur D. Howden Smith, has gone so far as to comment:

"It is strange to me that historians up to this time have failed to appreciate that all the important leaders of the Union and Confederate armies were trained by him (Scott), and that their performances in action were proportionate to the thoroughness with which they absorbed his ideas."(62)

During the Mexican War Lee served in Scott's army as an engineer officer.

"Scott employed the engineers in several ways, notably to make reconnaissances before battle and to advise him in forming strategic decisions. In reality the engineer officers were Scott's staff and they made a good one."(63)

Lee was a trusted subordinate who frequently made the decisive reconnaissance that resulted in the solution (normally some kind of envelopment) to Scott's tactical dilemma. In his biography of Lee, Douglas Southall Freeman tells the story of Lee in Mexico and reports how Lee, serving Scott as what Martin van Creveld has termed a "directed telescope", learned from Scott. Lee adopted Scott's standards of military deportment and his mentor's tactical techniques Bruce Catton writes:

"The business of living and looking the part of a great soldier, with splendors worn as a familiar cloak about starred shoulders; the battle techniques of bringing troops to the scene of the action and then relying on subordinates to run things; the readiness to rely on sheer audacity in the face of an enemy of superior numbers -- all of these, characteristic of Lee in Virginia, were equally characteristic of Scott in Mexico. Lee came to Vera Cruz as a engineer captain of Scott's staff. He never forgot what Scott taught him."(64)

Lee's favored technique in the Civil War was the envelopment, which he learned under Scott. The battles of Chancellorsville, Second Manassas and the second day at Gettysburg are all examples of Lee's use of the envelopment. Lee almost always operated on a single line of operation with Richmond as his base, a style of war he learned while participating in Scott's Campaign in Mexico. J. F. C. Fuller contended that in the Civil War Lee was unable to grow as a commander and adapt to changing situations(65). The facts indicate that Lee's style and operations were actually cemented in Mexico under Scott's tutelage.

General Grant, on the other hand, participated in the Mexican War with a much different experience. Grant was the regimental quartermaster and commissary officer for the Fourth Regiment of Infantry (a regular army unit). As the quartermaster Grant learned there was more to war than tactics and envelopments. Bruce Catton writes:

"At this point Grant got one more lesson in strategy. By all of the textbooks, an invading army must retain firm contact with its base of

supplies. Yet for Scott this was impossible, unless he used most of his army to protect the supply line. Boldly and simply, therefore, he cut loose from his base altogether. The army could collect food as it moved, and there would be time enough to reopen a line of supply after the enemy had been whipped....As a supply officer, Grant now learned what all this meant and how it was done, and the lesson stuck."(66)

In observing Scott's decision to abandon his supply lines and Scott's ability to persevere with no reinforcements from 7 August until 14 September 1847, Grant learned to make do with what the government provided and more importantly, what the government did not provide.

J. F. C. Fuller contends that while Grant learned lessons in Mexico, he also showed an ability to learn while in command during the war. Grant became a complete general and Fuller further contends that Grant could see war as a coherent whole unlike other Civil War generals.(67)

Schneider makes much the same point in his discussion of Grant's letter to Sherman of 4 April 1864. Grant's instructions to Sherman called for maximum destruction of all Confederate resources.(68) Scott's Anaconda Plan of 1861 had also proposed economic warfare on the South, although not on the scale that Grant and Sherman proposed.

Grant's use of the envelopment is also evident in his attempts to outflank Vicksburg and his continual sliding to the right against Lee in the 1864 campaign. Tactically, Grant was also a child of Mexico. He favored bayonet assaults because he had seen inferior numbers of American

soldiers continually succeed with cold steel in Mexico. Grant never understood the tactical impact of the rifle and he was not alone in his misunderstanding. It would take the horrors of World War I to drive home to military leaders the effects of the rifle, though by then rifle fire was combined with machine guns.

Clearly these two outstanding leaders, Grant and Lee, were the product of their Mexican War experiences. Their teacher was Winfield Scott.(69) T. Harry Williams praises Scott:

"Scott was a scientific soldier. Appreciating his disadvantages in not having had a formal military education, he had read widely in the available military literature, particularly in the writings of the eighteenth century, which stressed maneuver and the occupation of territory as the primary elements of strategy and cautioned against battle confrontation unless imperatively necessary. This was the strategy he would employ in Mexico, and for him in his situation, leading a small army in an enemy country and pursuing a limited objective--bringing the enemy to accept peace--it was the most appropriate. In executing it, he would show that he was a complete soldier--a consummate strategist, tactician, and logistician. His march of 260 miles from Vera Cruz on the Gulf Coast to Mexico City was a minor masterpiece and entitles him to be ranked with the great American captains."(70)

Since Grant, Lee and other Civil War generals were Mexican War veterans, they were better prepared intellectually for the Civil War, the first modern war. Scott's Mexican War example of operational leadership had been magnificent.

THE MEXICAN WAR AND EMERGING OPERATIONAL ART

FM 100-5 defines operational art in terms of activities within theaters of war or theaters of operations designed to employ military forces to achieve strategic goals. The Mexican War has both a theater of war and theaters of operations. Either President Polk, General Scott, or both saw the war against Mexico as a coherent whole with at least three separate theaters of operations (See map 1): the western theater of operations comprised of California and the New Mexico Territory, the northern theater of operations comprised of the Rio Grande border and northern Mexico, and the southern front comprised of the corridor from Vera Cruz to Mexico City. This strategic vision of the war was superseded by the reality of the war as it was fought, with two theaters of operations: a western theater and an eastern theater. Three field armies were deployed to conduct operations in these theaters (two armies in the eastern theater and one army in the western theater) and an attempt was made to coordinate the activities of the armies under a single commander.

Decisions as to whether or not to fight and if so when and where are elements of operational art. A commander with broad vision, with the ability to understand the relationship between means and ends and the requirement for

effective combined and joint operations, is also an essential part of operational art. In his Mexican campaign Scott met these criteria. He commanded the first major joint operation in American history, the amphibious landing at Vera Cruz. His expeditionary force was joint, composed of Army troops and Marines. Scott had vision: he knew how to defeat Mexico and he understood the relationship between ways and means.

FM 100-5 also has three operational questions. In essence they relate to the military conditions necessary for victory, the sequence of actions necessary to produce victory, and the way that resources should be applied. Scott met the requirements of the questions. He planned to defeat the Mexican Army and meant to bring them to battle by threatening the capital city. Destruction of the Mexican Army or the capture of the capital city (or both) would bring victory. His campaign plan was sequenced from Vera Cruz to Mexico City. He expected to fight at least two battles, the seizure of Vera Cruz and a second battle to destroy the Mexican Army. His use of operational pauses allowed him to rest, reorganize, and refit his army. The first pause was particularly important since he had to overcome the loss of 4,000 volunteers and integrate replacement volunteer regiments into his army. Scott applied his resources in the campaign to maximum effect and he won quickly and inexpensively.

The above indicates that Scott's actions in Mexico meet the test of FM 100-5 for the conduct of operational art. However, do they meet Professor Schneider's more rigorous criteria? (Schneider's more rigorous criteria are due to his contention that operational art is really a post-Civil War phenomena.(71)) In order to evaluate Scott's Mexican Campaign as emerging operational art, Professor Schneider's eleven criteria must be considered.

The first criterion is the employment of several independent field armies distributed in the theater of operations.(72) Considering Mexico as a theater of war and Eastern Mexico as a theater of operations (see map 1), there are two American field armies distributed in the theater of operations. Additionally, the American Armies had four separate operational axes in Doniphan, Wool, Taylor, and Scott in the theater of war. The distribution of Taylor and Scott forced Santa Anna to fight in two directions at once. Santa Anna correctly diagnosed Scott as the more dangerous threat and concentrated against Scott after Vera Cruz.

The second criterion is the employment of quasi-army group headquarters to control the armies in the theater of operations.(73) Due to the limitations of the communications technology in the 1840's, an army group headquarters was not feasible. Scott attempted to command both armies in the theater at once, but couriers and ships

could not achieve the speed of communication necessary for effective coordination.

The third criterion is the presence of a logistical structure to support distributed operations.(74) Scott's logistics were barely adequate for his purposes. His decision to abandon his lines of communications indicate an inadequate transport capability, and this led to his decision to live off the land. Fortunately for him, the central plateau of Mexico was very fertile. Taylor's army had a more than adequate logistics capability and a much shorter line of communications.

The fourth criterion is the integrated design of a distributed campaign plan.(75) In his attempt to coordinate with Taylor early in 1847, Scott was unsuccessful. The intent was there for an integrated campaign plan, but in reality no integrated campaign plan was executed. Taylor, Doniphan, and Wool became irrelevant; and Scott's operation was decisive.

The fifth criterion is the conduct of distributed operations.(76) There was no effort to conduct distributed operations, as Schneider describes them, in the Mexican War. Armies still concentrated for battles and remained restricted in lateral space in the area of operations. It can be postulated that Doniphan, Wool, Taylor, and Scott were distributed at the campaign level. It was impossible to conduct distributed free maneuver because communications

technology could not facilitate rapid reaction to a changing enemy situation. This inability to conduct distributed free maneuver among the four in a timely manner meant this distribution was not an operational factor in the war's outcome.

The sixth criterion is the use of strategic cavalry.(77) The only possible example of the use of strategic cavalry was the pursuit by Scott's dragoons after Cerro Gordo. The Mexican Army was reduced to a mob and prevented from rallying. However, the ensuing pursuit was only twenty miles in depth and did not prepare the way for further operations. This use of the dragoons here constitutes pursuit, not exploitation. It is exploitation that is the strategic use of cavalry. Strategic cavalry was an idea whose time had not yet come into the American way of war.

The seventh criterion is the deep strike.(78) When Scott conducted an amphibious operation a thousand miles from the mutual border to strike at the political heart of Mexico, the seventh criterion was met.

The eighth criterion is the conduct of joint operations.(79) The deployment of Scott's Army to Mexico was among the earliest of joint operations in American military history. The operation itself was unprecedented in size and unmatched until World War II.

The ninth criterion is the execution of distributed free maneuver.(80) Scott conducted distributed free maneuver in front of El Penon, taking the southern route to Mexico City, and in his approach to Mexico City proper. He fought no battles of attrition, battles which Schneider contends are a result of failed distributed free maneuver. Scott always attempted annihilation, at Cerro Gordo where he was successful, distributed free maneuver was employed.

The tenth criterion is the distributed battlefield.(81) There was no distributed battlefield in Mexico because the technology of the Mexican War could not produce a distributed battlefield. The weapons were smoothbore cannon, muskets, and cold steel. Scott himself was partly responsible for the American Army's lack of available modern technology as he was not in favor of percussion cap rifles since the army had a plentiful supply of flints on hand.

The eleventh criterion is the exercise of field command by officers of "operational" vision.(82) Scott showed operational vision in his plan for the amphibious landing, the seizure of Vera Cruz, and the campaign for Mexico City. Scott had also provided President Polk with sound operational plans for the other theaters of operations of the War.

Scott also displayed other examples of the use of operational art that do not fit into the categories listed above: he used spies and his engineers to gain intelligence

of operational value; he attacked Vera Cruz when only one-third of his siege train and logistics were available and later cut his own supply lines, thereby accepting operational risk; he accepted carefully calculated risk in his battles; and he identified and attacked the enemy decisive point, Mexico City.

Scott met all the general requirements of FM 100-5 for operational art. However, he only partially fulfilled the more rigorous requirements of Schneider's criteria. Of Schneider's eleven criteria, Scott completely fulfilled seven, partially fulfilled two, and failed completely at two. His failures were due to insufficient technology of weapons, communications, and transport. (In fourteen years the telegraph would cause communications to move at a speed undreamed of in Mexico. The railroad would make it possible to move masses of troops and logistics far more quickly and efficiently than they could be moved in the Mexican War.) The preponderance of evidence indicates that the Mexican War was the beginning of American emerging operational art.

CONCLUSION

The Mexican War is a forgotten war, overwhelmed by the magnitude of the Civil War just fourteen years later. The leaders of the Civil War were trained in Mexico where Scott had conducted daily discussions on the state of the army, covering logistics, engineering requirements, transport, movements, etc.(83) The heroes of the Civil War were the beneficiaries of a huge technology jump that yielded rifled shoulder arms, rifled cannon, railroads, and the telegraph, all of which changed the scale of war. The numbers of troops and casualties involved in the Civil War dwarf those of the Mexican War. And, since the Mexican War had not been a popular war, it was quickly forgotten. Perhaps Scott discovered a larger truth about the war: it did not cost enough blood to make a lasting impression. In his autobiography Scott spoke of the difference in perception between himself and Taylor.

"When the victory of Buena Vista reached Major-General Brooke (a noble old soldier) commanding at New Orleans, and a friend of Major-General Taylor, he rushed, with the report in hand, through the streets to the Exchange, and threw the whole city into a frenzy of joy. By and by, came the news that the Stars and Stripes waved over Vera Cruz and its castle, and Brooke, also a friend of mine, was again eager to spread the report. Somebody in the crowd early called out: 'How many men has Scott lost?' Brooke was delighted to reply--'Less than a hundred.' 'That won't do,' was promptly rejoined. 'Taylor always loses thousands. He is the man for my money.'

Only a few faint cheers were heard for Vera Cruz. The long butcher's bill was wanted. When I received friend Brooke's letter giving these details, I own that my poor human nature was plucked for a moment; and I said: 'Never mind. Taylor is a Louisianian. We shall, in due time, hear the voice of the Middle, the Northern, and Eastern States. They will estimate victories on different principles.' But I was mistaken. The keynote raised in New Orleans was taken up all over the land. Mortifications are profitable to sufferers...."(84)

The Mexican Army that the Americans fought was the best army Mexico would field in the nineteenth century. Grant said that on many occasions the Mexican troops stood up as well as any troops ever did and that they made as brave a stand as any soldiers he had ever seen.(85) It was poor senior leadership and inexperienced officers that did in the Mexican soldier.(86) The battles were not easy. They were won because of the superior operational maneuvers conceived of and conducted by Winfield Scott.

Scott demonstrated strategic understanding with his overall view of the theater of war, operational understanding within his theater of operations and superior tactical skill. Within the limits of pre-telegraph and pre-railroad military operations Scott conducted operations that must be classified as emerging operational art. He had transcended mere campaigning to operational art. This was the genesis of American operational art.

What is the value of studying this surprisingly modern general? His career indicates that there are two ways of

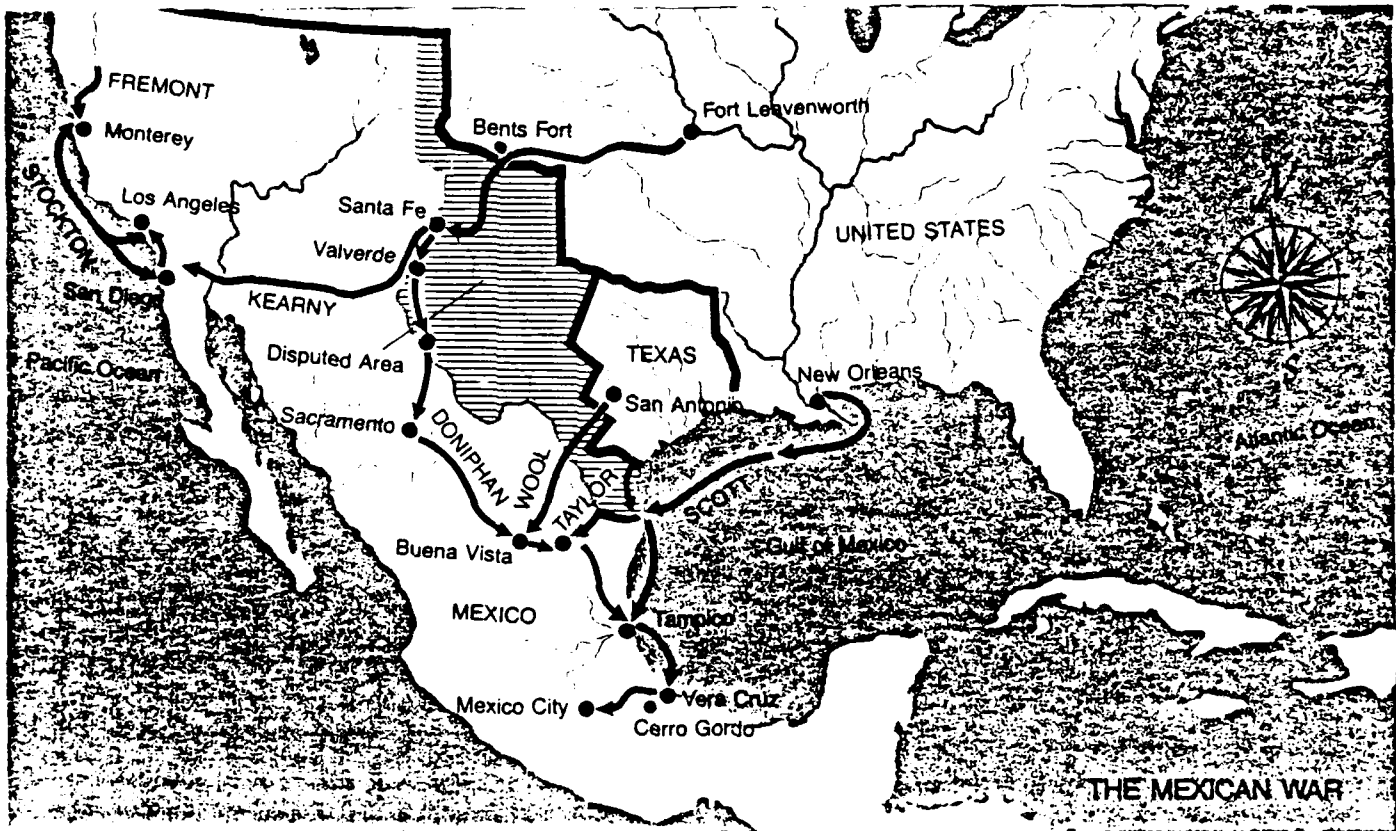
learning operational art: Operational art can be learned from military study and practice as Scott did, or by watching it performed and later practicing it as Grant did. Scott's career also teaches that operational commanders must have the mentality to practice operational art at the highest possible level that is consistent with the limits of existing technology, for it is technology that dictates just what level of excellence of operational art that can be achieved. Scott's campaign in Mexico teaches modern operational commanders that creativity and accepting risk can produce decisive results in logistically constrained military operations. Modern practitioners of operational art must have the same mental operational acumen as that demonstrated by Winfield Scott in his campaign in Mexico.

It may be fair to say that the world would have never heard of Lieutenant General Grant if it had not been as T. Harry Williams wrote of Scott at the beginning of the Civil War. "The old General dreamed wistfully of taking the field. 'If I could only mount a horse, I--' he would say sadly and pause, 'but I am past that. I can only serve my country as I am doing now, in my chair.'"(87)

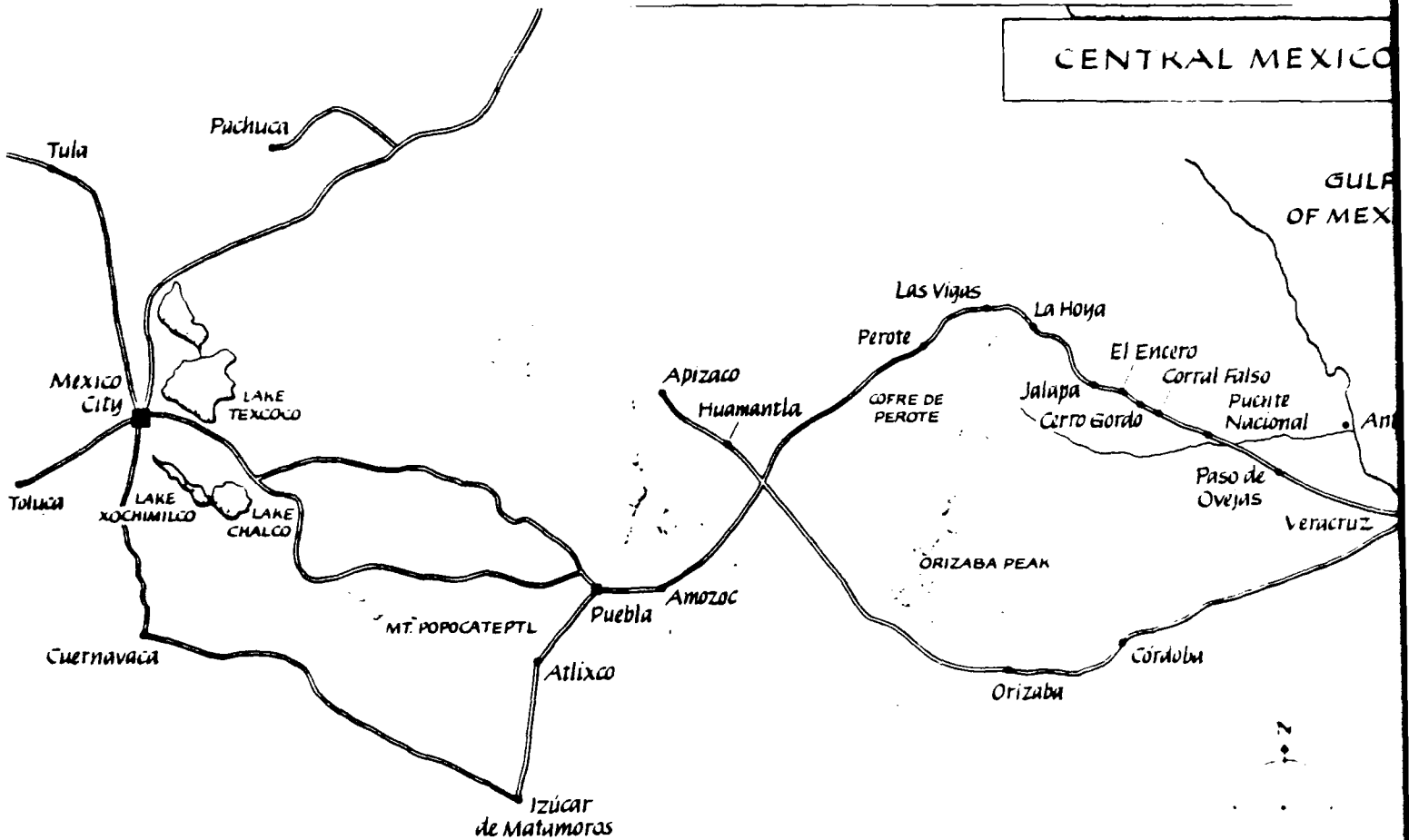
Great Scott!

APPENDIX 1 MAPS

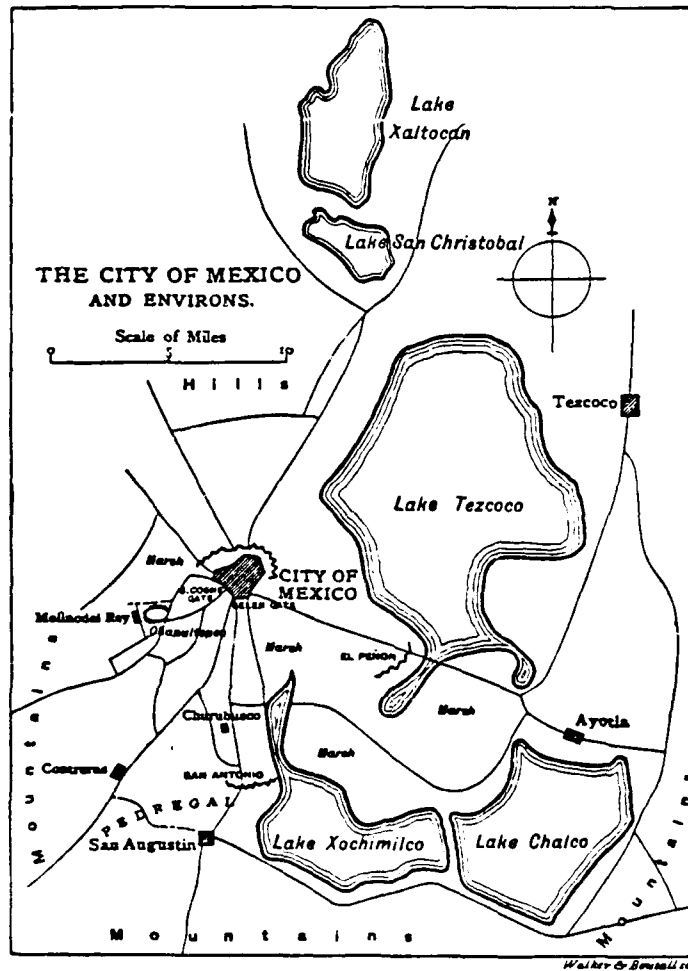
MAP 1 (88)



MAP 2 (89)



MAP 3 (90)



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