Captain Vincent James Tedesco III
Cavalryman & Scholar
531 Marjorie Mae Street
State College, Pennsylvania 16803

(814) 867-7006 Email – vjt104 @psu.edu or vjt@aol.com

Defense Technical Information Center
ATTN: G. Nair
DTIC-OCC
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"GREASY AUTOMATONS" AND "THE HORSEY SET": THE U.S. CAVALRY AND MECHANIZATION, 1928-1940

A THESIS IN

HISTORY

BY

VINCENT J. TEDESCO III

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SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS
FOR THE DEGREE OF

MASTER OF ARTS

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We approve the thesis of Vincent J. Tedesco III.

Date of Signature

Carol Reardon — 21 April 1995

Carol Reardon
Assistant Professor of History
Thesis Advisor

Robert J. Maddox — 21 April 1995

Robert J. Maddox
Professor of American History

Dan P. Silverman — 21 April 1995

Dan P. Silverman
Professor of European History

Gary W. Gallagher — 4/21/95

Gary W. Gallagher
Professor of American History
Head of the Department of History

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ABSTRACT

In the 1920s and 1930s, the United States Cavalry confronted fundamental questions about its identity framed within the context of intense branch partisanship and severe manpower and budgetary constraints. While it took prudent steps to maintain as powerful and modern a body of horse cavalry as possible, an intense struggle for the soul of the institution raged. Conservative officers insisted cavalry was the arm that fought on horseback. Pro-mechanization reformers proclaimed mobile combat power and not the horse to be the essence of the arm. Extremists garnered most of the attention then and since, but most cavalrymen stood somewhere in between. These men had a progressive attitude toward their arm. They understood the declining military utility of their mounts and sensed the armored vehicle's ability to replace it.

Despite this generally supportive attitude, the fact remains the cavalry only made halting progress between the World Wars toward mechanization. The small American mechanized cavalry program, and the assumptions upon which it was based, ensured that advocates of mechanization only slowly could build support for their reforms. Faster change called for exactly the kind of bold, visionary leadership the interwar Chiefs of Cavalry did not provide. Faced with the unenviable task of holding together an institution under attack from without and torn apart within, the chiefs sacrificed the cavalry's future on the altar of branch unity. With the creation of the Armored Force in July 1940, the United States Cavalry ceased to be the Army's arm of mobile combat power, becoming instead a monument to the failure of peacetime military innovation.

TABLE OF CONTENTS

LIST OF FIGURES v

ACKNOWLEDGMENTS vi

Chapter 1. CAVALRY ENTERS THE TWENTIETH CENTURY 1

Chapter 2. THE PARAMETERS OF DEBATE 12

Chapter 3. CAVALRY AND THE MECHANIZED FORCE 23

Chapter 4. MODERNIZING THE CAVALRY 41

Chapter 5. TESTING MODERN CAVALRY 57

Chapter 6. THE EXPANSION OF MECHANIZATION 71

Chapter 7. MAJ. GEN. JOHN K. HERR TAKES THE REIGNS 79

Chapter 8. FADING AWAY 105

BIBLIOGRAPHY 108

LIST OF FIGURES

Figure 1.1 The Pistol Charge 4

Figure 1.2 Renault M-17 Light Tank 7

Figure 2.1 Spectrum of Responses to Mechanization 18

Figure 2.2 Caught in the Middle 20

Figure 2.3 Horse Cavalry Dreams 21

Figure 3.1 The 1928 Experimental Mechanized Force 28

Figure 3.2 The 1930 Mechanized Force 35

Figure 4.1 Organization of the Office of the Chief of Cavalry, 1935 45

Figure 4.2 Mechanized Cavalry Regiment, 1931 51

Figure 4.3 "Modernized" Horse Cavalry Regiment 54

Figure 4.4 The Packhorse 55

Figure 5.1 T-3 Combat Car 59

Figure 5.2 *The Cavalry Journal* Sends a Message 61

Figure 5.3 *The Cavalry Journal* Repeats the Message 62

Figure 5.4 Mechanized Cavalry Regiment, 1935 66

Figure 5.5 M-1 Combat Car, 1936 68

Figure 6.1 7th Cavalry Brigade (Mechanized), 1939 72

Figure 6.2 Van Voorhis' Plan for the Mechanized Cavalry Division, 1937 74

Figure 7.1 Corps Cavalry Regiment , February 1941 93

ACKNOWLEDGMENTS

On a beautiful Sunday in May 1986, I pinned on the crossed sabers and gold bars of a cavalry lieutenant in the United States Army. It was the fulfillment of the dream that had dominated my life since my early childhood. The desire to become an Army officer came naturally to me. I was fortunate to be raised in a military family that inculcated in me the values of duty, honor, and country. The origin of my desire to be a modern cavalryman is more mysterious. Perhaps, the answer lies in too many afternoons spent watching movies such as *The Horse Soldiers*, *She Wore a Yellow Ribbon,* and *Patton.* Whatever the source, I campaigned hard throughout college to win a Regular Army commission and an initial assignment to an armored cavalry regiment.

After the commissioning ceremony concluded that afternoon, my fiancee, family, and I retired to a nearby restaurant for a meal. As we took our seats, I noticed an older gentleman staring at me. When our eyes met, he asked me why I was wearing cavalry insignia. I replied with pride that I was an officer in the 11th Cavalry. With undisguised bitterness, the gentleman informed me that was impossible. He had served in the cavalry and the Army had had no real cavalry since it got rid of the horse. The old man's assertion lingered in my mind in the years that followed. As I earned my spurs — figuratively and literally — I strove to honor the traditions and heritage of the mounted arm. When the United States Military Academy offered me the opportunity to return to Penn State to pursue a graduate degree in history, I jumped at the chance to exorcise his ghost. This thesis is the result.

While I am ultimately responsible for this document, many people have aided me in the project. A handful deserve special recognition. Dr. Timothy K. Nenninger graciously shared his time and personal correspondence files with me. Dr. Carol Reardon has carefully shepherded this naive military man through the confusion of academe. Her skills as a writer, scholar, and editor are the standards that I will continue to seek to emulate. My

parents taught me to love the Army, learning, and history. Raising a child of my own has reminded me how profoundly I am in their debt. My wife, Lianne, sacrificed and endured a great deal to help bring this effort to fruition. As patiently as a toddler is able, our daughter, Rachel, tolerated Daddy spending too much time as she described it "in his cave, playing with his 'puter." This thesis is a testament to Lianne and Rachel's abiding love.

CHAPTER 1.

CAVALRY ENTERS THE TWENTIETH CENTURY

Cavalry has lost none of its importance in the scheme of our national defense. For open warfare, in campaigns where armies do not have their flanks resting on perfect obstacles, there is more use for Cavalry than ever before in modern war. The broad principles underlying the conduct of open warfare have not been changed by the experience of the late war, and it is for open warfare that our Army is being trained.

Maj. Gen. Willard A. Holbrook
Chief of Cavalry, 1921[1]

A careful study of the World War indicates conclusively that cavalry failures resulted from nonconformity to American doctrine...

Maj. Gen. Leon B. Kromer
Chief of Cavalry, 1938[2]

Twentieth-century horse cavalry has become a paradigmatic example of the failure of military institutions to adapt to technological change. Consider how it has been maligned in debates about the post-Cold War roles, mission, and structure of the United States military. With the certainty born of hindsight, polemicists have pointed to "the lesson of the cavalry." Here, they say, is an institution that buried its head in the sand while the world changed around it.[3] Their reductive argument aside, the fact remains that the persistence of horse cavalry in the United States Army well into the 1940s demands

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[1]Maj. Gen. Willard A. Holbrook, "Excerpts from the Annual Report of the Chief of Cavalry" in *Report of the Secretary of War to the President*, Government Printing Office, Washington, D.C., 1921, 237.

[2]Maj. Gen. Leon. B. Kromer to Lieut. Col. Guy W. Chapman, Naval War College, TL, 16 Mar. 1938 File Correspondence, Jan.-May. 1938, Box Correspondence, 1935-1938, Willis D. Crittenberger Papers, United States Army Military History Institute, Carlisle Barracks, PA. Hereafter referred to as the Crittenberger Papers. United States Army Military History Institute referred to hereafter as USAMHI.

[3]See for example Brig. Gen. Robert L. Stewart, "Newer Technology: Another Way To Get Oats To the Horses?," *Army* 45 (1 Jan. 1995) and Maj. Harold L. Spurgeon and Stanley C. Cist, "Armor in the 21st Century," *ARMOR* 103 (1 Jan.-Feb. 1994).

some explanation. It raises fundamental questions about the nature and behavior of military institutions in peacetime and their ability to keep pace with technology.

Historically cavalry had been the arm of mounted *combat* power. Its superior mobility distinguished it from the infantry and artillery. The cavalry's traditional missions reflected this quality. These missions were divided into two broad categories: operations in the main battle, and those conducted beforehand, afterwards, or on its periphery.

In the main battle, cavalry's primary defensive tasks involved providing an agile reserve capable of blunting enemy penetrations or regaining the initiative with swift counterattacks. On the offense, cavalry provided shock action. Massed cavalry charges shattered enemy infantry formations and drove a beaten army from the field of battle. Through the Napoleonic Wars cavalry shock action succeeded due to the poor accuracy, short range, and slow rate of fire of muskets, all of which ensured that the horsemen could close with infantry faster than they could be killed. Once the cavalry reached the infantry's lines, cold steel and sheer momentum ravaged the soldiers literally underfoot.

In the mid-nineteenth century, technological change altered the terms of the infantry's relationship with cavalry. Rifles replaced the infantry's smoothbore muskets and gave footsoldiers the power to keep the horsemen at bay. Accurate, long-range riflery dissipated the shock effect of the charge. In the face of this change, armies tended to emphasize the second traditional category of missions in their cavalry doctrine.[4] These tasks preceded or followed the clash of main armies: reconnaissance, security, pursuit, and independent operations. Long-range and close reconnaissance amounted to searching out the enemy. Security missions such as pickets and guards involved preventing the enemy from surprising the army. Pursuit, of course, meant hounding a fleeing enemy. Finally, independent operations encompassed raids and other missions the cavalry undertook at a

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[4]The term doctrine is often used imprecisely. For the purposes of this study, doctrine is defined as the body of official thought that guides decision-making and establishes the terminology of professional military discourse. As such, it cannot be easily separated from either organization or technology. Doctrine shapes the organization of an army. It has a reciprocal relationship with technology. Technological possibilities influence decisions about doctrine that then determine what technologies are pursued.

distance from the main body of the army. Cavalry excelled in all these tasks because of its ability to rapidly cover large areas and long distances.

The American Civil War demonstrated the growing relevance of such missions. It taught American soldiers to discard their Napoleonic conceptions of battle cavalry and instead think of it as highly mobile infantry adept in the reconnaissance, security, and independent operations.[5] The war also raised questions about the future of cavalry. Concerned by the increasing use of entrenchments and the growing firepower of infantry and artillery, even veteran cavalry officers such as Lieut. Gen. Philip H. Sheridan began to question the arm's future. Cavalry might remain useful for reconnaissance, security, and independent operations at the strategic level, but Sheridan doubted its future tactical role. After the war, he and other American cavalrymen debated the weapons and tactics best suited to preserve the mounted arm's claim to mobile combat power.[6]

Technological change complicated the debate again in during the First World War. New battlefield realities raised serious questions about the viability of traditional horse cavalry. Even accustomed as they were to fighting mounted, European cavalrymen quickly learned that *élan* was no match for twentieth-century firepower. Confronted with rifles, machine guns, and artillery, European horse cavalry was useless in the attack and unable to perform its reconnaissance and security missions adequately.[7] With the onset of trench warfare, traditional cavalry all but disappeared from the Western Front. It neither could move nor survive on the battlefield. In the war of attrition that followed, European armies found they could afford neither the manpower nor the horses required to maintain a

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[5]For analysis of the evolution of American cavalry during the Civil War see among others Edward Hagerman, *The American Civil War and the Origins of Modern Warfare: Ideas, Organization, and Field Command*, (Bloomington, IN: Indiana University Press, 1988) and Grady McWhiney and Perry D. Jamieson, *Attack and Die: Civil War Military Tactics and the Southern Heritage*, (University, AL: The University of Alabama Press, 1982), 126-139.

[6]Jamieson, Perry D. *Crossing the Deadly Ground: United States Army Tactics, 1865-1899*. Tuscaloosa, AL: The University of Alabama Press, 1994, 84-91.

[7]Reconnaissance is the collection of information on the battlefield. In most contexts, it amounts to finding the enemy, determining his strength, dispositions, and intent. Security involves preventing an enemy from inferring with or gathering information about a friendly force.

large cavalry reserve if conditions should change. Cavalry remained useful only in the Eastern Europe and in Palestine where the frontlines rarely stagnated.[8]

The United States Army entered the war in 1917 with a cavalry doctrine quite different from that of European armies, one that reflected the America's unique military experience. While the Europeans preferred to fight from horseback, American cavalry was, in truth, mounted infantry. They rode into action, dismounted, and fought on foot. On occasion, American cavalry attacked on horseback as small units had done during the Philippine Insurrection and the Punitive Expedition in Mexico. Even so, American cavalry conducted these attacks in a distinctive way, one that reflected its Civil and Indian Wars experience. The semiautomatic pistol, not the saber, was the American cavalryman's weapon of choice. As Edward L. Katzenbach shrewdly pointed out, this technique amounted to mounting the inaccurate on the unstable.[9]

Figure 1.1 The pistol charge — The peculiar idiom of American cavalry. (from *The Cavalry Journal* Vol. 41 No. 173 Sep.-Oct. 1932, p. 48.)

Neither the Punitive Expedition nor the European war seriously tested American cavalry. A shortage of shipping prevented the Army from deploying large bodies of horse

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[8]Col. T. Bentley Mott, Sub: "French Cavalry Doctrine and Training: A Comparison between Pre-War and Post-War Doctrine," M.A. Paris 10,936-W, TDS, 10 Feb. 1926, *U.S. Military Intelligence Reports: France, 1919-1941* , (Frederick, MD: University Publications of America, 1985, microfilm), 3F565 and "Report of the AEF Cavalry Board," TDS, 24 Apr. 1919, File 334.7, Box 12, RG 177, Records of the Chief of Cavalry, National Archives and Records Administration, Washington, D.C., 7-28. Hereafter referred to as RG177. A few of the boxes in the Records of the Chief of Cavalry are further labeled as the Records of the Mechanized Cavalry Board and will be hereafter identified as such.

[9]Edward L. Katzenbach, Jr., "Tradition and Technological Change," in *American Defense Policy*, ed. John F. Reichart and Steven R. Sturm, Fifth ed., (Baltimore: The Johns Hopkins University Press, 1982), 641.

cavalry overseas.[10] It sent the troopers from four horseless regiments to France to run remount depots. One horse unit, a hastily mounted squadron of the 2nd Cavalry, briefly saw action in September 1918. It had some success in mounted and dismounted patrols on the flanks of two American divisions during the Meuse-Argonne offensive. By mid-October, however, the combination of poor mounts, difficult conditions, and insufficient replacements forced an end to the squadron's brief career.[11] American cavalrymen contributed to victory in ways unrelated to mounted combat. Many spent the war serving in other arms, above all the Field Artillery, where their horse expertise was useful in handling gun teams. Other cavalrymen served at home guarding the Mexican border.[12]

The war did little to change American cavalry doctrine. The Army's leadership considered trench warfare an aberration. The boards convened to record the lessons of the war reflected this outlook. The American Expeditionary Force's (AEF) Superior Board found "no reason for change in the American conception of the tactical employment of cavalry."[13] The panel convened expressly to study the war's lessons for the arm, the AEF Cavalry Board, reaffirmed the validity of the prewar doctrine.[14] The Army believed it still required horse cavalry to provide mobile firepower for reconnaissance, security, raids, and offensive operations on the periphery of the main battle. Cavalrymen concluded primarily that their arm needed more firepower, enough to make them competitive with infantry when dismounted.[15] In succeeding years, American cavalrymen continued to draw upon this perception in their discussions of the arm's future.

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[10]Lieut. Redding F. Perry, "The 2d Cavalry in France," *The Cavalry Journal* 37 (150 Jan. 1928): 27. *The Cavalry Journal* referred to hereafter as *CJ*.

[11]Earnest N. Harmon, "Personal Memoirs," TD, undated, File Personal Memoirs Copy, Box 3, The Earnest N. Harmon Papers, USAMHI, 27-54.

[12]David E. Johnson, "Fast Tanks and Heavy Bombers: The United States Army and the Development of Armor and Aviation Doctrines and Technologies, 1917-1945," (Ph.D. diss., Duke Univ., 1990), 296.

[13]"Report of the Superior Board on Organization and Tactics," TDS, 19 Apr. 1919, Box 12, RG 177, 66,77.

[14]"Report of the AEF Cavalry Board," TDS, 24 Apr. 1919, File 334.7, Box 12, RG 177, 2-4,28.

[15]Lieut. Col. C. Burnett, Sub: "Cavalry in the World War," TD, undated, Box 1, Guy V. Henry, Jr. Papers, USAMHI. and Martin Blumenson, ed., *The Patton Papers, 1885-1940* , (Boston: Houghton Mifflin Company, 1972), 763. Guy V. Henry, Jr. Papers hereafter referred to as the Henry Papers.

Despite this commitment to continuity within the arm, the wartime exploits of the motor vehicle and airplane caused many to foresee change ahead; they increasingly began to question the horse cavalry's future utility. During the war, armored cars and aircraft assumed the horse cavalry's long-range reconnaissance duties. Trucks became important for moving men and supplies behind the lines, displacing many of the draft animals and horses previously used for the same purpose. These vehicles also gave infantry strategic and operational speed that now exceeded that of cavalry.[16] The tank stepped into the tactical gap left by cavalry, providing the mobile firepower missing on the First World War battlefield. As conceived and operated during the war, the tank became a siege engine used to aid the advance of infantry, even though it was slow, mechanically unreliable, and difficult to control in action. Despite these problems, British and French success with tanks prompted similar efforts by the United States.[17] Two cavalrymen, in particular, figured prominently in the wartime Tank Corps. Brig. Gen. Samuel D. Rockenbach commanded the AEF's Tank Corps. Another cavalryman, Lieut. Col. George S. Patton, Jr., commanded one of the three American tank battalions that saw action in late 1918. By the war's end, the Army possessed a large inventory of primitive tanks and a doctrine that cast them in a supporting role to the infantry. It also had a number of officers — including cavalrymen — who saw potential in the tank's synthesis of mobility, firepower, and protection. Still, the Superior Board concluded that tanks were an infantry auxiliary, incapable of independent action, and recommended that they be absorbed into that arm.[18]

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[16]For a discussion of the role played by trucks in the First World War see Marc K. Blackburn, "A New Form of Transportation: The Quartermaster Corps and Standardization of the United States Army's Motor Trucks, 1907-1939," (Ph.D. diss., Temple Univ., 1992) and Norman M. Cary, Jr., "The Use of the Motor Vehicle in the United States Army, 1899-1939," (Ph.D. diss., University of Georgia, 1980).

[17] A handful of authors have touched on this subject. The most detailed study of American tanks in the First World War is Dale E. Wilson's, *Treat 'Em Rough: The Birth of American Armor, 1917-20*, (Novato, CA: Presidio, 1990). Johnson's dissertation and Timothy K. Nenninger, "The Development of American Armor, 1917-1940," (Masters thesis, University of Wisconsin, 1968) also cover the subject of American armor in the First World War in detail.

[18]Johnson, 56.

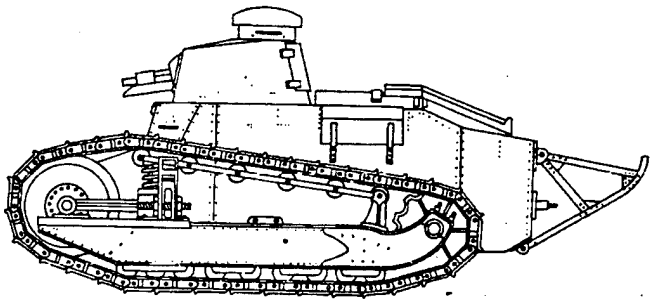

Figure 1.2 Renault M-17 Light Tank. The American Army used this French model during the First World War and retained them as its standard light tank throughout most of the interwar period. The M-17 was a two-man tank. It weighed just 3.5 tons, traveled at only five miles per hour, and was armed with either a machine gun or a 37mm cannon. (from Macksey, *Tank*, 1971, p 38.)

The 1920s and 1930s saw the military institutions of the major powers still grappling with the integration of incompletely understood First World War technologies. The task of completing in peacetime a transition begun in war was not an easy one. Four years of attrition produced a deep-seated abhorrence of war in Western society. Collective security and disarmament agreements such as the Kellogg-Briand Pact, the London Naval Conference, and the Locarno Pact fostered the belief that war on the scale of 1918 would never be repeated. War debts, reconstruction, and then the Depression demanded that governments economize on military spending. Nonetheless, in this environment, soldiers around the world had to come to terms with the doctrinal and technological legacy of the First World War. The application of automotive technologies such as the tank to land warfare after the First World War became one of the most serious tests of military innovation this century.

Mechanization and motorization are two manifestations of this struggle. While the tank and the truck proved useful during the war, their integration into the doctrine and inventories of postwar military establishments spawned considerable debate. Mechanization shaped the process of working out the tank's role. It involved enhancing power of combat units through doctrinal and organizational schemes that exploited the protection, firepower, and mobility of armored fighting vehicles. Motorization, finding the truck's place, sought ways to substitute motor vehicles for the animals that moved and

supplied. Whereas motorization changed the way armies moved, mechanization changed the way they fought.

The interwar Army's official definitions of the two terms made it clear that the mechanization would be the greater challenge for the cavalry. While the War Department stated that motorization could provide "increased strategical mobility for units of all types," mechanization required "the application of mechanics directly to the combat soldier on the battle field."[19] The emphasis on trucks and strategic mobility inherent in motorization constrained its combat power. Motorized infantry in its vehicles was road-bound, had less ability to disperse, and when it dismounted it was no more mobile than its foot-borne counterpart. With its individual mounts and greater off-road mobility, horse cavalry better fit the requirements for tactically mobile combat power. Mechanization was an altogether different proposition, however. It offered to combine the strategic celerity of motorization with the firepower, protection, and tactical mobility of the tank. Tracked armored vehicles were much less sensitive than trucks to variations of terrain and weather. They could leave the roads and maneuver under fire that would halt the advance of traditional infantry and cavalry.

By challenging the cavalry's monopoly on mobile combat power, mechanization presented cavalrymen with three choices: they could either embrace, accommodate, or reject the newcomer. The ensuing debate created animosities that persist to this day. Evidence of this debate may be found in professional journals, official documents, and private correspondence. It forced cavalrymen to face a fundamental question: what was cavalry? Was it the arm that fought on horseback or the arm of mobile combat power regardless of the source of that mobility. If it was the former, mechanization threatened to deprive the cavalry of many of its remaining combat roles. It if was the latter, mechanization offered to

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[19]Board of Officers to Adjutant General, Sub: "A Mechanized Force," TDS, 1 Oct. 1928, File AG 537.3 Proceedings: Board of Officers Appointed to make Recommendations for Development of a Mechanized Force, Box 2705, RG 407, Records of the Adjutant General, NARA, Washington, D.C., 3. Hereafter referred to as RG 407. Emphasis in original.

increase the arm's power and silence its critics. In which case, some way would have to be found to reconcile mechanization with the mounted arm's traditions and culture.

Scholars have yet to explain satisfactorily how and why the cavalry decided this question or the implications of various possible answers for the process of mechanization. Histories of American cavalry focused exclusively on the rich traditions of mounted units and end abruptly with the First World War.[20] Their authors used the interwar cavalry as a postscript, capturing how the noble war-horse drowned in the tide of material progress. There is little room in these romantic narratives of the arm's heyday for the question of the cavalry's ability to adapt itself to twentieth-century warfare. Edward L. Katzenbach has shaped much of the historical consideration of the topic. He argued in 1958 that cavalry officers' conservatism smothered the development of American mechanization between the World Wars.[21] Drawing upon a handful of professional military journal articles and government documents, Katzenbach described the postwar U.S. Cavalry as a stagnant, monolithic institution more concerned with justifying the status quo than with increasing its relevance to war in the industrialized age. He insisted there were "no pressures to change cavalry thinking from inside the arm." In his estimation, *The Cavalry Journal*, the arm's professional journal, "paid almost no attention to mechanization" and contained little critical thought on the subject.[22] Subsequent authors have used Katzenbach's thesis uncritically to bolster their normative arguments about military innovation.[23]

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[20]Richard Edward, *The Yellowlegs: The Story of the United States Cavalry*, (Garden City, NY: Doubleday, 1966); John K. Herr and Edward S. Wallace, *The Story of the U.S. Cavalry, 1775-1942*, (Boston: Little, Brown and Company, 1953); and James M. Merrill, *Spurs to Glory: The Story of the United States Cavalry*, (Chicago: Rand McNally, 1966).

[21]Edward L. Katzenbach, Jr., "The Horse Cavalry in the Twentieth Century: A Study in Policy Response," *Public Policy* 7 (1958), 120-149. The same essay was reprinted twice with minor revisions and omissions. See "Tradition and Technological Change" above and "The Horse Cavalry in the Twentieth Century," in *The Use of Force: International Politics and Foreign Policy*, ed. Robert J. Art and Kenneth N. Waltz, (Boston: Little, Brown and Co., 1971), 277-297.

[22]Katzenbach, "The Horse Cavalry in the Twentieth Century," 293-294.

[23]See for example Stewart, "Newer Technology," and Gen. Donn A. Starry, "To Change An Army," *Military Review* 63 (3 Mar. 1983): 20-27.

Studies of the early evolution of American armored warfare provide the most useful explanations.[24] Unfortunately, these accounts too often force the cavalry into the role of vociferous opponent of mechanization and fail to acknowledge the parameters of the arm's response. Three broad themes emerge from this literature. First, scholars generally characterize the cavalry as an ultraconservative institution that refused to accommodate itself to the realities of modern war. David Johnson has described the cavalry as the last refugee of the nineteenth-century warrior and the cult of the horse.[25] He wrote that "the mystique of the glory and manliness of war, both unchallenged by the slaughter in the trenches, found a sanctuary in [the cavalry] which felt its very existence depended on thwarting the machine."[26] Timothy K. Nenninger's more balanced study still characterized the cavalry as more reactionary than the other arms.[27] Second, historians single out the Office of the Chief of Cavalry as the mainspring of resistance to mechanization. Johnson argues that the maldistribution of power within the War Department ensured that conservative horsemen had a powerful ally in the Chiefs of Cavalry.[28] Finally, the extremes at both ends of the argument naturally have drawn the most attention from historians. As a result, most interpretations describe polarization of the cavalry arm into reactionary and a pro-mechanization factions.[29]

These interpretations are misleading. They fail to account for the varied texture of responses to mechanization within the cavalry. Johnson and Nenninger both acknowledged a spectrum of response, but they limit their analysis to two poles. This oversimplified their arguments about the cavalry's role in the development of American

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[24]The major works on American mechanization are Johnson's dissertation; Nenninger's thesis; Mildred H. Gillie, *Forging the Thunderbolt: A History of the Development of the Armored Force*, (Harrisburg, PA: The Military Service Publishing Company, 1947); John L. S. Daley, "From Theory to Practice: Tanks, Doctrine, and the U.S. Army, 1916-1940," (Ph.D. diss., Kent State University, 1993); and Richard M. Ogorkiewicz, *Armor: A History of Mechanized Forces*, (New York: Frederick A. Praeger, 1960). Robert Cameron's Ph.D. 1994 dissertation at Temple is a noteworthy recent addition that was not available for incorporation into this study.
[25]Johnson, 298.
[26]Ibid., 297-298.
[27]Nenninger, 83.
[28]Johnson, 589.
[29]Ibid., 299-300, 304-305, 307-308; Gillie, 36-37, 91; and Nenninger, 93, 111-112.

armored doctrine, presenting a reductive picture of the debate. The crucial battle for the future of the cavalry occurred in the middle ground between the two extremes. There progressive officers struggled to reconcile their love for the horse with the pressing demands of modernity. No account of the interwar cavalry can be complete without considering the fundamental question confronting the arm. How individual officers viewed the future of cavalry determined where they stood on the issue of mechanization. Scholars have also either ignored or dismissed efforts to modernize the horse cavalry even while mechanization was being considered. The efficacy of this proposition notwithstanding, it was an important part of the debate. To the degree that progressive cavalry officers convinced themselves the horse cavalry still could be considered modern, they diminished the potential support for reform.

At the same time, these interpretations overstate the power of the Chiefs of Cavalry and understate the need to build a consensus for change. The chiefs were no doubt powerful players, but their ability to influence the debate and course of mechanization within the cavalry arm had real limits. These were the product of structural and fiscal constraints that fostered competition within the War Department as well as practical limitations on the ability of the chiefs to influence opinion within the cavalry. In a small army, well-connected officers could find many ways to obstruct or undermine the policies of a Chief of Cavalry. Advocates of mechanization eventually exploited these opportunities to secure a more aggressive program of mechanization within the Army.

Taken together, consideration of these factors produces a much more sophisticated and satisfying account of the interwar cavalry's reaction to mechanization. It is an account that is more balanced and empathetic. It removes the burden of hindsight. More importantly, it provides insight into the process of peacetime military innovation as it actually occurs, not as people might wish it to be.

CHAPTER 2.

THE PARAMETERS OF DEBATE

> We are further removed from war and the possibility of war than we have ever been since the foundation of the Republic. Yet we are better equipped to meet the eventualities of war than ever before.
>
> Representative William R. Wood, Republican from Indiana
> Chairman of the House Appropriations Committee [30]

The National Defense Act of 1920 made important changes in the structure of the War Department and the organization of the Army. It created the offices of the Chiefs of Cavalry, Infantry, Coast Artillery, and Field Artillery and placed them near the top of the War Department hierarchy. While subordinate to the General Staff, the new Chiefs of Arms gained broad authority over the organization, training, and doctrine of the tactical units in their particular arms.[31] Moreover, the senior officer of each arm gained the right of direct access to the chief of staff. With the General Staff weakened by the same act, the strength of the individual arms created a dynamic that would profoundly influence technological and doctrinal change in the interwar Army. While the it was still studying the lessons of the First World War, important changes were underway in the domestic political climate and the structure of the American military. After the disappointment of Versailles, the American public turned its back on the world and its own armed forces. The nation wanted its army to once again be small, inexpensive, and out of sight.[32] As

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[30]Robert K. Griffith, *Men Wanted for the U.S. Army: America's Experience with an All-Volunteer Army Between the World Wars*, Westport, CT: Greenwood Press, 1982), 117.
[31]The Chiefs' authority ended at the regimental level. For example, the Chief of Cavalry controlled cavalry units from the regiment down to the squad, while the cavalry division was the responsibility of the General Staff.
[32]Griffith, 1.

austerity set in and resources dwindled, the chiefs' paid more attention to institutional survival and branch prerogatives than to the development of their respective arms.[33]

This left only the attenuated General Staff to look after the needs of the Army as a whole. Contemporaries noted that this spirit of disharmony developed in most pronounced ways between the infantry and cavalry arms. Col. Bradford G. Chynoweth, an infantry officer at the time, explained the deep roots of this particular animosity. He wrote the infantry had felt inferior to the cavalry before the war. Infantrymen believed that cavalrymen were promoted and selected for key positions in disproportionate numbers. The infantry knew that the war had fundamentally reversed this relationship, and Chynoweth believed they were determined to retain their new advantage.[34] For their part, cavalrymen felt slighted in the postwar reductions and blamed this on a hostile faction within the War Department General Staff.

Such jealousies festered in the resource constrained postwar environment. Severe limitations on the Army's manpower and budget fueled internecine struggles within the War Department. Under pressure to economize on government expenditures, Congress never authorized the 280,000 men provided for by the National Defense Act of 1920. Army strength hovered around 130,000 men for much of the interwar period. In the hope of preserving a framework for any future mobilization, the Army chose to eliminate some units and skeletonize others.[35] This decision had a particularly dramatic effect upon the cavalry, producing a sense of persecution that later events only inflamed. In a short period, its strength fell from twenty-five to just fourteen regiments. Even the surviving regiments were manned at only half strength.[36] The demand for new types of units to take advantage

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[33]Johnson, 255; Blackburn, 88; and Gen. Lucian K. Truscott Jr., *The Twilight of the U.S. Cavalry: Life in the Old Army, 1917-1942*,(Lawrence, KS: University Press of Kansas, 1989), 154.
[34]Bradford G. Chynoweth, to Col. George S. Pappas, "Recollections of his Army Career," TLS, 24 Oct. 1967, Box 3, Bradford G. Chynoweth Papers, USAMHI, 41-42. Hereafter referred to as the Chynoweth Papers.
[35]War Department, *Annual Reports of the Secretary of War,* Government Printing Office, Washington, D.C., 1919-1940 and John W. Killigrew, *The Impact of the Great Depression on the Army*, (New York: Garland, 1979),Conclusion 1-8.
[36]Herr and Wallace, 244.

of wartime innovation worsened the manpower crunch. Creating the Army Air Corps and anti-aircraft and antitank units required additional cuts in the personnel assigned to the traditional arms. These losses engendered bitter disputes among the arms as they jockeyed to protect a force structure already deemed dangerously inadequate. Rivalry impeded cooperation. This environment proved especially dangerous for the cavalry. Its critics in the infantry and other arms saw a partial solution to their own manpower problems in further cuts in cavalry strength.[37] They could argue persuasively that the nation's defenses would be served better by reducing the cavalry instead of arms whose contribution to victory in the last war was evident.[38]

Fiscal austerity matched manpower constraints as a source of internal War Department strife. Supported by only minimal appropriations, the Army lived off its war surpluses through the 1920s. Just as it began to see real increases in its budget, the Depression caused appropriations to tumble once again.[39] Most years, the Army's budget barely covered the cost of maintaining the existing force. The Army chose to defer badly needed modernization and to distribute the burdens of austerity evenly across the arms. Congress mandated the creation of the Air Corps without providing additional appropriations for the project.[40] The Army operated under a budget ceiling established by the new Bureau of the Budget. With this ceiling tied to the previous year's appropriation, new programs such as mechanization required either cuts in existing accounts or special appropriations.[41]

In the 1930s, federal spending to stimulate the economy under the New Deal offered the Army a chance to redress its growing material deficiencies. In 1933, President Franklin D. Roosevelt offered to make Public Works Administration (PWA) funds available to the Army. In response, the Army requested $304 million to cover

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[37]Truscott, 154.
[38]Johnson, 296-297.
[39]Killigrew, I-16 to 17 and II - 2.
[40]Griffith, 111.
[41]Killigrew, I-8 to I-11 and III-23 to 24.

modernization of equipment. Roosevelt approved only $10 million before authorizing the expenditures.[42] Even this windfall spawned great apprehension among Army planners. They feared that additional money would not be forthcoming in the future to maintain and operate equipment initially purchased with PWA funds.[43] Fiscal austerity severely restricted the development and purchase new combat vehicles in large quantities. Army policy called for the purchase of only small numbers for testing and evaluation and hoped it had acquired enough to develop doctrine and facilitate planning for emergency wartime production.[44] The proponents of mechanization did not receive the types and numbers of equipment they needed to develop, test, and sell the idea of mechanized warfare.

Manpower and fiscal problems were not the only obstacles of mechanization. Inertia and what can only be described as a weak spirit of military professionalism also hindered the Army's development between the wars. Again, Chynoweth's experience captured this problem. While a member of the War Department G-3 — the staff section responsible operations, doctrine, and training — in the mid-1930s, Chynoweth's advocacy of mechanization met resistance from the section chief himself. Maj. Gen. John Hughes told Chynoweth it was not the Army's job to prepare for war, but to "get along in peacetime."[45] Hughes' unprofessional attitude reflected an institutional climate adverse to innovation and reform in the cavalry.

The Army also suffered from uncertainty about national strategy and its role in it. Politicians refused to articulate a strategy from which military planning might progress.[46] Left to their devices, the services determined that only Japan posed a credible military threat

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[42]Ibid., XI-23 to 26.
[43]Ibid., XI-5 to 6.
[44]War Department, Secretary of War, *Excerpts from the Annual Report of the Chief of Staff in Report of the Secretary of War to the President,* by Gen. Douglas MacArthur, Government Printing Office, Washington, D.C., 1932, 84.
[45]Chynoweth, "Recollections of his Army Career," 3.
[46] Ronald Spector, "The Military Effectiveness of the US Armed Forces, 1919-39," in *Military Effectiveness*, ed. A. R. Millett and W. Murray, Vol. II *The Interwar Period.* (Boston: Allen & Unwin, 1988), 70-97.

to the United States.[47] Participation in another European war seemed unlikely, so the Army focused on preparing to defend American interests in the Western Hemisphere, the Philippines, and China.[48] In each case, a small force would have to cope with difficult terrain, inadequate roads, and open warfare. These plans favored the mounted arm. As Army Chief of Staff Charles P. Summerall told the readers of *The Cavalry Journal* in 1930, "any campaign along our borders or in the continental United States would peculiarly favor the extensive use of cavalry."[49] He assumed that horse cavalry provided the combination of mobility and combat power required by a tiny Army defending a huge expanse of land. Certainly, the Mexican border region with its difficult terrain and austere transportation and communication infrastructure commended itself to the massed employment of horse cavalry.[50]

The interwar period saw change come to the Army. The overall interwar climate can only be described as hostile to substantive innovation, however. The creation and rapid expansion of the Army Air Corps and preparations for national industrial mobilization proved to be exceptions to the broader pattern of neglect. In both examples, strong public and political support sustained advocates of change and spurred the War Department to action.[51] Until Roosevelt's declaration of a national emergency in September 1939, however, the Army and most of its component institutions perceived their vital interests and even their existence to be under attack. In this context, the cavalry arm fought tooth and nail to fend off the attacks of its brother arms. In many eyes, survival and not evolution was the task at hand.

Within this framework, cavalry officers grappled with the implications of mechanization for their arm. At least one contemporary recorded his own system for

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[47] Great Britain also had the capacity to threaten the United States, but hostilities with Britain were extremely unlikely.
[48] Killigrew, 78,85; Griffith, 70; and Killigrew, I-14.
[49] Gen. C.P. Summerall, "Cavalry in Modern Combat," *CJ* 39 (161 Oct. 1930): 491.
[50] Allan R. Millett and Peter Maslowski, *For the Common Defense: A Military History of the United States of America*, (New York: The Free Press, 1984), 399.
[51] Ibid., 396-397,407.

classifying cavalry officer's attitudes toward mechanization. In his opening remarks to a group of cavalry officers at Fort Knox in 1937, Capt. Hayden A. Sears described three classes of mounted soldiers. He commented on the multitude of officers "who at first pooh-poohed the idea [of mechanization] because it was fashionable to do so in mounted circles...and who now, finally, realizing that he missed the train, is running like hell trying to catch up." Sears added as his second type the "dyed-in-the-wool horsesoldier of polo, hunting, and steeplechasing proclivities who, though a good mounted officer, believes that mechanization sympathizers are trying to do away entirely with the horse." Lastly, Sears noted the "ardent, but ignorant proponent of mechanization, who believes that all other arms and services are dependent on, and subservient to, the newly established elements of mechanization."[52]

To make sense of the debate while preserving its complexity and nuances requires a new perspective. In that regard, the taxonomy proposed by Harold R. Winton in his study of British mechanization offers a useful template.[53] While it does not fit precisely the less pronounced extremes of the American situation, his scheme establishes the parameters of the debate nonetheless. Winton identified six basic responses to peacetime military innovation. (See Figure 2.1) Revolutionaries sought radical change: complete mechanization and the redistribution of roles and missions. Reformers supported substantive changes but understood what was possible given the times. These officers wholeheartedly embraced mechanization, but they realized a peacetime army during an economic crisis hardly could make wholesale changes on the scale advocated by the radicals. Closer to the middle of the spectrum stood the progressives. These individuals preferred incremental changes within the existing framework. They supported a variety of changes designed to enhance the cavalry's capabilities but were not wed to mechanization

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[52]Capt. Hayden A. Sears, "Mechanization Abroad," Address to 7th Cavalry Brigade Officers Tactical School, TD, File Capt. Sears Conference on Mechanization, Box 1 Maneuvers, 1938-39, RG 177, Records of the Mechanized Cavalry Board, 1.

[53]Harold R. Winton, *To Change an Army: General Sir John Burnett-Stuart and British Armored Doctrine, 1927-1938*, (Lawrence, Kansas: University Press of Kansas, 1988), 27-30.

as the sole path to the future. Naturally, conservatives took a different view. They sought to graft the new onto the old. As Winton stated, conservatives "appreciated neither the limitations of the system they wished to preserve nor the potential of the new concepts."[54] Reactionaries reflexively dismissed the need for any change or reform. The sixth category includes the indifferent. They contributed nothing to the intellectual debate and may be safely ignored.

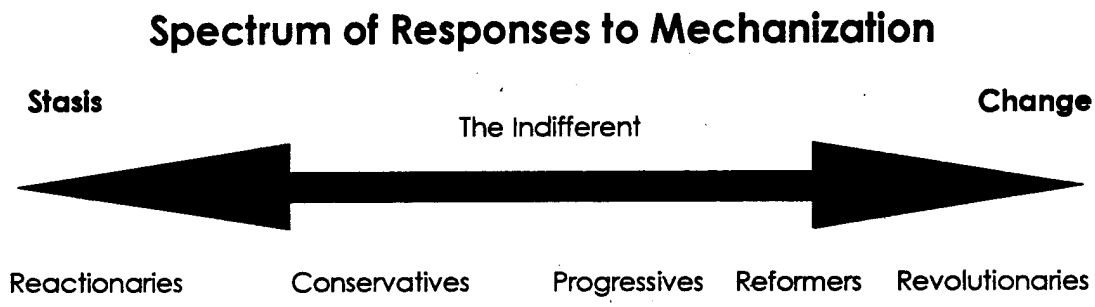

Figure 2.1 Spectrum of Responses to Mechanization

Between the World Wars, the United States Army did not produce revolutionaries comparable to Great Britain's J.F.C. Fuller and Sir Basil H. Liddell Hart. Its most vocal proponents of mechanization were simply too pragmatic to meet Winton's criteria for revolutionaries. Instead, the strongest advocates of mechanization in the American Army were reformers. Conservative cavalrymen derisively called these men "greasy automatons." As they struggled with the structural and attitudinal challenges confronting them, reformers used their influence to safeguard the progress of mechanization. They bided their time, developing the mechanized cavalry at Fort Knox and waiting for an opportune moment to demand a larger share of the cavalry's resources. In the absence of great material advancement, reformers had no choice but to argue for mechanization's potential. In the meantime, they carefully respected the strength of the cult of the horse. Since most cavalrymen were unprepared to forsake their mounts completely even reformers called for the retention the horse cavalry, albeit on a limited scale.

[54]Ibid., 29.

Proponents of mechanization pejoratively called their opponents "the horsey set." Historians have been slightly kinder, referring to these men variously as mossbacks, the antediluvian reaction, or simply, the reactionary horsemen. Few of them justifiably can be labeled reactionaries; the vast majority were simply conservatives. They shared a belief that the cavalry and the horse were inseparable and displayed a decidedly anti-modern attitude in their attacks on mechanization. Consider this passage by Col. Alexander M. Miller in which he waxed poetic about the spiritual union of horse and man:

> Combine the two animals, man and horse in sympathetic understanding of nerve and muscle, stimulated by the knowledge of their combined speed and power and you have a different and exalted being; superior in daring, dash, élan, and all-around 'ground' mobility to any combination of man and machine.[55]

Conservatives insisted armored vehicles were unreliable, road-bound, noisy, and unsuited for cavalry missions, especially in North America. They liked to couch the mobility of the horse in automotive terms. This passage by an unnamed contributor to *The Cavalry Journal* was typical:

> The horse has good axle clearance, and no high centers in the road ever disturbs him. He has a very short wheelbase, and can change direction on a dime and give nine cents change, where mechanical vehicles can't turn on a thousand dollars in Reichmarks.[56]

These officers confidently maintained that technology could never produce a machine with all the attributes of a horse, most of all its ability to operate under any terrain and weather conditions. As progress in armored vehicles undermined the basis for their argument, the conservatives increasingly emphasized the types of cavalry missions that best suited the horse. Conservatives might tolerate the introduction of mechanized cavalry as an additional and minor component of the arm, but stridently opposed its expansion at the expense of horse units.

True reactionaries went beyond the fringes of credibility. Only a handful participated in the American cavalry arm's discussions of mechanization. Almost without exception, these officers served in foreign armies. An Austrian colonel, Mauriz Viktorin,

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[55]Col. Alexander M. Miller, "Mechanized Cavalry," *CJ* 40 (168 Nov.-Dec. 1931): 54.
[56]One Who Rides When He Must, "May I Say a Word for the Horse?," *CJ* 48 (212 Mar.-Apr. 1939): 146.

provided an early example of the rhetoric of reaction. Without elaboration, he warned that "care must be taken...that the Cavalry does not lose her true nature by the amalgamation with mechanized units; that is, the horse must remain the predominant element in the Cavalry division."[57]

Regardless of the label, critics of mechanization within the cavalry spoke with powerful voices. By virtue of rank and seniority, many crusty old horsemen were able to impose their views on junior officers around them. They hid the irrationality of their fears behind the mask of experience and the smoke screen of America's unique strategic situation. Their criticisms rested on fear and ignorance, but they contained just enough truth to influence even officers more inclined to accommodate change.

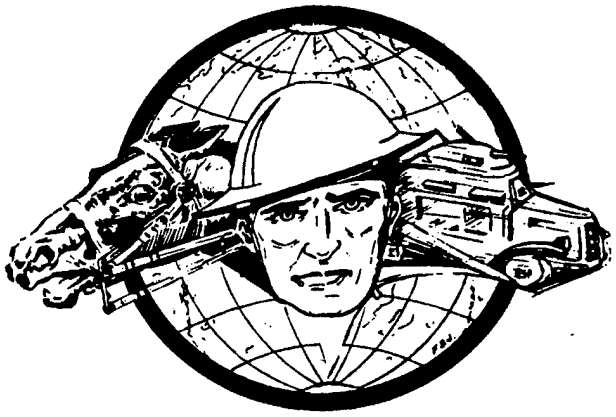

Figure 2.2. Caught in the Middle. This picture of a cavalryman seemingly torn between the horse and a armored vehicle, unintentionally captured the situation many cavalry officers found themselves in the late 1930s. (from *The Cavalry Journal,* 48, No. 2 Mar.-Apr. 1939, endpiece.)

The extremists' arguments at both ends of the spectrum have distorted the historical record and obscured much of the cavalry's thought on mechanization. Caught between the reformers and conservatives, progressive officers preferred incremental change. "To justify itself in wars of the future, all cavalry has to do is put new life into old ideas," cautioned Lieut. Col. Bernard Lentz, an infantry officer, in the pages of *The Cavalry Journal.* Mechanization, motorization, and "gadgetization" would improve cavalry, but

[57]Col. Mauriz Wiktorin (Austrian Army), "Tactical Mobility of Cavalry," *CJ* 42 (177 May-Jun. 1933): 6.

they should not be overdone.[58] Many cavalrymen found some truth in Lentz's suggestion. They hoped that a little "modernization" was all that was needed to silence criticism directed at the arm by it's detractors.

Part of the reason progressives felt this way stemmed from their enjoyment of the life of a horse cavalryman. No one joined the cavalry in the 1920s and 1930s unless they liked horses. They looked at the automobile as a tool. The personal connection these men felt for their mounts cannot be understated. The horse was a living and emotional being that demanded special treatment. Even the Army bureaucracy seemed to recognize that. It required horses be carried by name and number on morning reports, just as their riders were.[59] Cavalrymen described their relationship with their mounts in marital terms. The sheer amount of time spent together and the need to cooperate to get the job done made horse and rider intimately familiar with each other. Indeed, cavalrymen spent their professional lives mastering and caring for their mounts.[60]

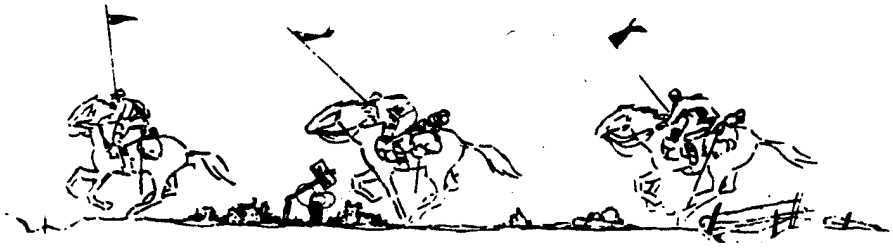

Figure 2.3 Horse Cavalry Dreams. Lances held aloft, these cavalrymen had little difficulty negotiating barbed wire. (from *The Cavalry Journal* Vol. 39 No. 160 Jul. 1930, p. 420.)

Even in the twentieth century, life in the cavalry seemed to have a timeless quality. It would not be to much to say that a trooper from the Indian Wars would have had little difficulty adjusting to life in an American horse cavalry regiment between the World Wars. A typical cavalrymen found himself at a small western post, where his 800-man regiment constituted the entire garrison. The days and years followed a comfortable and dependable

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[58]Lieut. Col. Bernard Lentz, "A Justification of Cavalry," *CJ* 44 (187 Jan.-Feb. 1935): 11.
[59]Victor Vogel, *Soldiers of the Old Army*, Texas A&M University Military History Series, (College Station, TX: Texas A&M University Press, 1990), 48.
[60]Truscott, viii.

cycle of events. He spent his morning grooming and exercising his mount and surplus horses. In the afternoon, one troop — about one hundred men — worked on post maintenance, while the others trained in either equitation or marksmanship. Team sports served as a frequent diversion. Saturday mornings brought mounted inspections; Sundays, more horse grooming. He spent the Fall and Winter preparing for individual qualification with the pistol, saber, and rifle in the Spring. His Summers were spent on maneuvers.[61]

The horse dominated the off-duty time of cavalrymen and their families. Whether at a backwater cavalry post such as Fort Brown, Texas, or the high-profile 3rd Cavalry station at Fort Myer, Virginia, equestrian events formed the core of garrison social activities. Every cavalry post had its horse shows, polo teams, and hunt club.[62] The cavalry also furnished the nation's equestrian teams for the Olympics and other international competitions. Cavalrymen obsessed over polo. More than recreation, polo demonstrated the cavalryman's martial prowess. Senior cavalrymen sanctioned the game as a form of training. As the first Chief of Cavalry, Maj. Gen. Willard A. Holbrook, wrote in his 1921 annual report:

> There is no sort of training that develops initiative, quick thinking and prompt action so surely as training in polo. This game properly played, not only develops leadership in the player, but it develops knowledge of the horse, his condition, and care. For this reason, the Chief of Cavalry encourages all Cavalry officers to play polo as much as possible.[63]

The love of horses and horsemanship combined to make it very difficult for cavalrymen to consider the future of their arm without the horse. As one young cavalry officer later recalled, there was no "doubt that many of us who loved polo and jump riding and steeplechasing emotionally resented the inevitable shift."[64]

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[61]Griffith, 35-36, 89, 94-95.
[62]Johnson, 298-299.
[63]Maj. Gen. Willard A. Holbrook, "Excerpts from the Annual Report of the Chief of Cavalry " *in Report of the Secretary of War to the President*, Government Printing Office, Washington, D.C., 1921, 235.
[64]Hamilton Howze, interview by Lieut. Col. Robert Reed, TDS, Senior Officer Oral History Program, USAMHI, 33-34.

CHAPTER 3.

CAVALRY AND THE MECHANIZED FORCE

> The horse has no higher degree of mobility today than he had a thousand years ago. The time has therefore arrived when the Cavalry arm must either replace or assist the horse as a means of transportation or else pass into the limbo of discarded military formations.
>
> Secretary of War George Dern, 1933[65]

For much of the 1920s, the cavalry had little to do with mechanization. Only with the creation of the Experimental Mechanized Force in 1928 did the mounted arm begin to grapple with the implications of this new form of mobile combat power. By the end of the decade, it was becoming increasingly evident to cavalrymen that their arm would have to come to terms with mechanization and the issues it raised.

As suggested by the AEF Superior Board, the National Defense Act of 1920 abolished the wartime Tank Corps and transferred all tanks and the proponency for mechanization to the Chief of Infantry.[66] Left with a handful of armored cars, the cavalry arm maintained only a peripheral interest in mechanization during the next eight years. This is not to argue that cavalrymen did not contemplate the potential of armored vehicles for their arm. Even among the minority who had some first hand knowledge of tanks, the manifest inadequacies of the leftover First World War tanks available to the Army dissuaded all but the most forward thinking officers. Only a few in the cavalry community stepped forward to proclaim the potential of mechanization.

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[65]War Department, Secretary of War, *Report of the Secretary of War to the President,* Government Printing Office, Washington, D.C., 1933, 30.
[66]Johnson, 117-118.

Maj. Bradford Chynoweth was among the first to call on cavalrymen to embrace the tank. He knew this idea would terrify some horsemen, but explained why such a change in attitude was necessary. "One need not draw back in fear that the tank will replace the horse," Chynoweth insisted. "On the contrary," he added, "it is likely to enhance the value of the horseman as it has strengthened the infantryman on foot."[67] Without the tank's support, Chynoweth believed the machine gun would eventually force cavalry to relinquish its role in the main battle.[68] He hoped tanks would provide "the additional impetus" required to resurrect the cavalry attack. Chynoweth concluded by repeating his belief that "tanks have appeared to renovate and not eliminate the mounted service."[69]

Although carefully phrased, Chynoweth's ideas were advanced for their time. Articles in *The Cavalry Journal* reflected the skepticism with which cavalrymen generally approached the military utility of vehicles. Lieut. Eugene Smith argued that a mechanized force was suited only for refighting the last European war. It was too expensive to adopt wholesale he argued. Like most of his contemporaries, Smith could not envision cavalry without horses so long as vehicles were fragile, expensive, and largely tied to improved roads. As defenders of the horse consistently argued for the next twelve years, he insisted that vehicles lacked the all-terrain mobility of the horse and thus were unfit to replace them. He wrote:

> Many who are strong advocates of the motorization and mechanization of armies advance the thought that future wars will be fought entirely by aeroplanes and tanks. But saner thought will indicate that, so long as there remain mountains, valleys, rivers, and forests, there will always be natural obstacles... and there will always remain regions where the individual soldier, mounted on a horse or packing his weapons on his back...can occupy critical points of which he can deny the passage of the enemy vehicles.[70]

Other cavalrymen found more aesthetic means of expressing their reservations about mechanization. Consider the following poem printed originally in the Cavalry School's 1928 yearbook:

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[67]Maj. Bradford G. Chynoweth, "Cavalry Tanks," *CJ* 30 (124 Jul. 1921): 248.
[68]Ibid., 249-250.
[69]Ibid., 250-251.
[70]Lieut. Eugene F. Smith, "Armored Vehicles with Cavalry," *CJ* 37 (150 Jan. 1928): 95.

ARMORED CARS
By
"Swede" Nelson

My saddle's hanging on a peg.
I'm taking off my spurs,
I'm moving across country
On a steel cayuse that purrs;
For information we are told
From all points near or far,
Instead of horses as before,
We'll use an Armored car.

So be it Chevy or LaSalle
(It matters not at all)
The best of motor busses
At different times will stall.
They cannot jump high hurdles.
Cross streams or leap a ditch,
To start and stop is not an art,
'Tis done by a small switch.

This brand new Arm, like Cavalree,
Will have its own esprit,
Wear leather coats, big tin hats —
Like Armored Knights they'll be
But when upon their mission bold,
Along some well worn trail,
Me thinks this whole idea will prove,
Another Holy Grail.

Cause Armored cars with tires flat,
And spark plugs filled with grit,
Can hardly move like Cavalree
And keep from getting hit.
It's not a case of oil and gas,
So I'll be on my way,
But let me tell you this, my friends,
The Cavalree will stay.[71]

In four stanzas, the author captured the mantra of the opponents of mechanization and motorization in the 1920s. Automotive vehicles remained unreliable. They lack the mobility of the war horse. They were a passing fad. They were more vulnerable than horseflesh.

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[71]Maj. C.L. Clifford, ed. The *Rasp: The Cavalry School, Army of the United States* , Fort Riley, KS 1928, 199.

Of course, the cavalry's isolation from the currents of technological change did not last. The first in a series of changes that would ultimately lead cavalrymen to rethink the issue mechanization came in 1927. That year the Chief of Cavalry, Maj. Gen. Herbert B. Crosby, recommended, and Secretary of War Dwight Davis approved, the addition of a small number of tanks and antitank weapons to the existing cavalry division.[72] Otherwise, cavalrymen saw few modern vehicles. Each of the fifteen Regular Army horse cavalry regiments possessed only a handful of passenger cars for administrative transportation. More significantly, Davis' November visit to the British Experimental Mechanized Force engerized American mechanization policy. He watched the unit defeat a mixed infantry and cavalry force three times its size in less than forty-eight hours of operations. Impressed by what he had seen, Davis returned and ordered the U.S. Army to conduct its own tests.[73]

The Chief of Staff, Gen. Charles P. Summerall, took steps to execute Davis' order. He directed the G-3, Maj. Gen. Frank Parker, a cavalryman, to study the issue and recommend a course of action. In his report, issued in March 1928, Parker called for the creation of an small mechanized force built around a battalion of light tanks. He envisioned it as an independent unit assigned at corps level or higher where it would lead important attacks, act as a mobile reserve, guard the corps' flanks, and seize key terrain ahead of the corps' advance. These were traditional cavalry missions. Whether Summerall's approval of Parker's report reflected his own convictions or Davis' pressure is unclear. Nonetheless, Summerall convened a second board to work out details. His instructions to the new board emphasized the need to create a force using existing assets. Summerall did not find tank technology sufficiently advanced to justify an appeal to Congress for new equipment for a mechanized force.[74]

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[72]Nenninger, 83-84. Crosby was Chief of Cavalry from 21 Mar. 1926 until 20 Mar. 1930.
[73]Johnson, 218 and Winton, 82
[74]Nenninger, 88-91; Johnson 220-222; and Board of Officers, to Adjutant General, Sub: "A Mechanized Force," TDS, 1 Oct. 1928, File AG 537.3 Proceedings: Board of Officers Appointed to make Recommendations for Development of a Mechanized Force, Box 2705, RG 407, 2-3.

To support of the second board's investigation, the Army assembled an experimental mechanized force at Fort Leonard Wood[75] outside Washington, D.C., for three months of tests beginning in July 1928. A light tank battalion with M-17s, a heavy tank battalion of Mk VII's[76], a separate medium tank platoon, and a motorized infantry battalion formed its core. A cavalry armored car troop, a motorized artillery battalion, and supporting troops rounded out the three-thousand-man organization.[77] (See Figure 3.1) After a few days of individual training and experiments with short marches, the force made a five-day roadmarch from Fort Leonard Wood to Aberdeen Proving Grounds, Maryland, then to Carlisle Barracks, Pennsylvania, and home again. This march allowed the General Staff to determine the best command, control, and logistical techniques for the unit. From the end of July through September, the Experimental Mechanized Force conducted tactical training in the missions Parker had outlined. In all these, its First World War-vintage trucks and tanks severely limited its activities. Even when all the equipment was running, the unit barely could maintain a march speed of four miles per hour. Its equipment was in such poor repair and so out-of-date that to avoid unnecessary embarrassment the force's commander, Col. Oliver S. Eskridge, Infantry (Tank), asked the War Department to cancel a visit by foreign military attachés. While such a fragile and slow-moving organization could hardly give Parker's ideas an adequate test, the Experimental Mechanized Force stimulated thinking about mechanization and reinforced the need for modern equipment.[78]

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[75]Fort Meade is the current name for the installation where the Experimental Mechanized Force trained in the summer of 1928.

[76]The Mk VIII was the standard American heavy tank of the First World War. It was a rhomboid tank of British design jointly produced with the United States in 1918. It weighed 37 tons and moved at a mere 6 miles per hour. Its eight man crew operated seven machine guns and two 57mm cannon.

[77]Details of the composition of the Experimental Mechanized Force are somewhat cloudy. None of the published sources provide much detail about the kinds and numbers of weapons and the strength of its subordinate units. Supporting troops included: engineer and signal companies; chemical warfare service and maintenance platoons; and medical, ammunition, and repair sections.

[78]Nenninger, 85-88; Gillie, 21-24; and Johnson, 218-219.

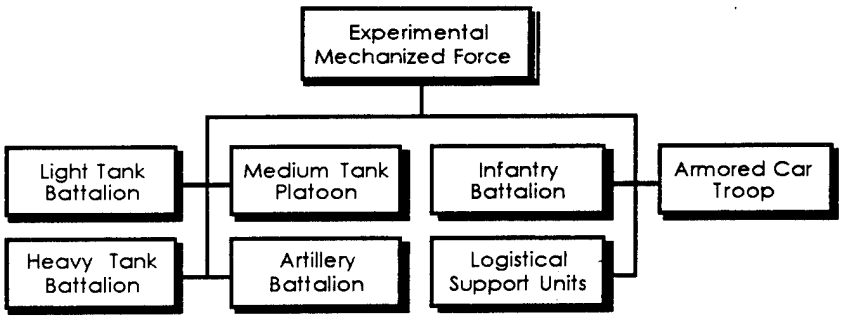

Figure 3.1 The 1928 Experimental Mechanized Force

The Experimental Mechanized Force generated much debate within the Army about mechanization. *The Cavalry Journal* 's editor emphasized that the War Department studies had reached the conclusion that complete mechanization and motorization was neither feasible or desirable. The author suggested that mechanized units were only needed for special situations such as attacking an organized defense.[79] Brig. Gen. James Parker argued that tanks were only useful in creating opportunities to employ the horse cavalry. He called the idea of replacing horse cavalry with tanks "preposterous."[80] Col. Mauriz Wiktorin, an Austrian cavalryman, drew upon the "lessons" of the British Experimental Mechanized Force maneuvers to allege that these American tests had shown that mechanization was effective only under unrealistic peacetime conditions. He insisted horse cavalry performed better in combat.[81] The tone of all these articles, however, expressed more criticism of the Experimental Mechanized Force as a unit than they revealed hostility to mechanization in general.

Even experienced tank commanders such as Patton expressed doubts about the ability of mechanization to substantially replace horse cavalry. In a letter to his friend Chynoweth, Patton expressed only qualified confidence in mechanization's future. Though it might eventually supplant traditional units, he believed mechanization had little

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[79]"Motors Will Not Displace Infantry and Cavalry," *CJ* 37 (152 Apr. 1928): 439.
[80]Brig. Gen. James Parker, "The Cavalryman and the Rifle," *CJ* 37 (152 Apr. 1928): 367.
[81]Col. Mauriz Wiktorin (Austrian Army), "Motorized and Cavalry Divisions," *CJ* 37 (152 Apr. 1928):419-424.

potential during in their military lifetimes.[82] In a subsequent letter, Patton insisted he was as strong an advocate of mechanization as anybody, but at the moment a fast cross-country car was not technologically feasible. "I have flown, ridden and walked over every place that I have been stationed ever since mechanization came up," Patton argued, "and I have seldom found places where any machines could operate without the assistance of infantry to fight for it and cavalry to see for it."[83]

Patton was typical of those officers who moved in and out of the ranks of the conservatives. His equivocal views on mechanization reflected what his biographer, Martin Blumenson, described as an attempt to appease both sides of the debate.[84] Blumenson contended that Patton's loyalty to the horse cavalry led him to be increasingly identified with the conservatives.[85] Indeed, Patton more often than not sided with the horsey set, using his First World War tank experience as a weapon against the reformers.

He reasoned that mechanized units depended on expensive, specialized vehicles that always would be in short supply. Since, as he argued, "no nation will ever start a war with many machines," combat would quickly exhaust the supply of armored vehicles. Patton estimated that countries would then need a year or more to rebuild their shattered mechanized forces. Thus, he concluded, such organizations inevitably would play only a minor role in future wars. "God," he reminded his fellow cavalrymen, "takes care of horse replacements."[86]

Patton found the capabilities of mechanized units suspect. During reconnaissance and security operations, he argued, small groups of horsemen could operate day and night and were difficult for the enemy to detect. In comparison, it would be easy to avoid noisy mechanized patrols, especially at night when he considered all machines totally useless.

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[82]Chynoweth, "Recollections of his Army Career," 3.
[83]Maj. George S. Patton, to Bradford G. Chynoweth, TLS, 29 May 1929, File Correspondence 1928-29, Box 1, Chynoweth Papers.
[84]Blumenson, 914.
[85]Ibid., 916-917. Patton was clearly a political animal in uniform. At one point, he counseled his friend Bradford Chynoweth to restrain his aggressive promotion of modernization so that he might get along in the Army. Chynoweth, "Recollections of his Army Career," 3
[86]Maj. George S. Patton, Jr., "Mechanized Forces," *CJ* 42 (179 Sep.-Oct. 1933): 8.

Patton harped on other failings of mechanized units. Horses could swim water obstacles that stopped machines cold.[87] Armored vehicles lacked horses' instinct for self-preservation. He suggested tanks' usefulness would only deteriorate as their novelty wore off and the already powerful antitank defenses improved.[88] Patton also insisted that the horse cavalry could defeat mechanized units by striking their vulnerable supply trains, by exploiting their poor reconnaissance, and especially through night attacks.[89] His tendency toward exaggeration occasionally got the better of him. Patton suggested mechanized units might be stopped by every stream and gully that crossed their path. Thus, he concluded that "it is often certain that mechanized units must often choose between forcing a passage or abandoning a mission."[90] Patton the horse cavalryman had apparently forgotten the ability of mobile troops to bypass obstacles rapidly.

Despite his criticisms of the concept, Patton also spoke up in support of mechanization. He conceded that vehicles had greater tactical speed, and their armor allowed them "to develop maximum tactical effect in a minimum of time."[91] Patton asserted such vehicles would be especially useful when operating with horse cavalry. He believed that "the fighting machine will conserve the strength of mounted troops and will contribute materially to their combat power."[92] In 1930, Patton called on the arm to accept some degree of mechanization, writing that "instead of rivalry, there should be union to insure strength.... The Cavalry should have fast cross-country machines for extended rapid maneuver in operations against the enemy's front, flanks and rear."[93]

Ultimately, Patton believed that the reformers overstated the potential of mechanization. "History," he insisted, "is replete with countless other instances of military

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[87]Maj. George S. Patton Jr., "Motorization and Mechanization in the Cavalry," *CJ* 39 (160 Jul. 1930): 336-339.
[88]Patton, "Mechanized Forces," 6.
[89]Patton, "Motorization and Mechanization in the Cavalry," 344-345.
[90]Patton, "Mechanized Forces," 7.
[91]Ibid., 6.
[92]Maj. George S. Patton, Jr. and Maj. C.C. Benson, "Mechanization and Cavalry," *CJ* 39 (159 Apr. 1930): 239.
[93]Ibid., 237-238.

implements each in its day heralded as the last word — the key to victory — yet each in its turn subsiding to its useful but inconspicuous niche." Today it was the machine but "they too, shall pass."[94] The traditional arms such as the horse cavalry would prevail in time. Military history "confounds blithesome theories of the self-styled mechanists or scientific warriors who are so exhilarated by the gaseous exhalations of their pet machines as to be oblivious to the necessity for more prosaic arms."[95]

Maj. C.C. Benson rose in support of mechanization. In *The Cavalry Journal* he called for the creation of two mechanized brigades. He argued the cavalry should "adopt the newcomer," describing cavalry and mechanization as a natural combination. In a moment of sober reflection, Benson lamented that "the Cavalry is interested primarily in the horse."[96] A few months later, he published another article in *Infantry Journal.* Broadening the scope of his argument, Benson argued that tank would fundamentally change the face of the battlefield. He maintained that:

> When land fleets engage on terrain occupied by other troops, infantry and cavalry formations will be shattered, artillery positions overrun, signal communications disrupted, command posts isolated and all semblance of order lost:. Regardless of what tactics the landships adopt, *their presence on the battlefield will necessitate drastic changes in the present combat tactics of Infantry and Cavalry.*[97]

Benson described a hypothetical future war for his readers. In his scenario, a nation that adopted mechanization policies much like those currently adopted by the United States had its army defeated by another with more forward-looking policies. Notably, he illustrated how enemy tanks easily overwhelmed the horse cavalry of the American-style army. Benson insisted it was absurd to expect horse cavalry to stop tanks. He predicted that even the demonstration regiment at the Cavalry School would be unable to halt such an attack. The author added that since security of large units depends upon the cavalry, it "*should be the first to recognize, teach and apply the improved methods that fast cross-*

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[94]Patton, "Mechanized Forces," 8.
[95]Patton, "Motorization and Mechanization in the Cavalry," 333-334.
[96]Maj. C.C. Benson, "Mechanization Aloft and Alow," *CJ* 38 (154 Jan. 1929).
[97]Maj. C.C. Benson, "Ships on the Battlefield," *Infantry Journal* 34 (3 Mar. 1929): 239. Emphasis in the original.

country fighting machines will provide."[98] Clearly, Benson's ideas about the role of armored vehicles in the cavalry ran far ahead of most of his contemporaries.

As the debate raged, the General Staff moved to codify the lessons of the Experimental Mechanized Force. It concluded that mechanization's potential could not be evaluated properly without modern equipment.[99] Summerall' called for a second board to study the Experimental Mechanized Force and chart future mechanization policy. Two cavalry officers served on this board: Col. Roger S. Fitch represented the Chief of Cavalry and Maj. Adna R. Chaffee, Jr., sat in for the Operations Section. After observing the Experimental Mechanized Force's maneuvers and demonstrations of its vehicles, the board submitted its report in October 1928. It called for a 2000-man organization combining a single light tank battalion, two infantry battalions carried by tracked vehicles, and supporting troops much as those sustaining the Experimental Mechanized Force. The report described the future mechanized force as a combined arms unit capable of performing a variety of offensive missions on favorable terrain. The report's authors seconded the set of missions Parker assigned the mechanized force. It was to be a highly mobile, self-contained, offensive unit that operated independently at the corps and army level. The board carefully avoided stepping on any toes. While asserting that "mechanization will bring radical changes in the tactical doctrine of the next war," the board explicitly stated that both traditional cavalry and infantry remained important. It called for all arms to participate in mechanization, stating "all branches must be studying this question and must keep abreast of developments." The report concluded with a detailed plan for securing appropriations for the modern equipment such a force would need to be effective.[100]

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[98]Benson, "Ships on the Battlefield," 240-244. Emphasis in the original.

[99]Maj. Adna R. Chaffee, Jr., "The Status of the Mechanized Combat Organization and the Desired Trend in the Future," Address to Lecture delivered at the Army War College, Washington, D.C., 19 Sep. 1929, TD, Box War Department Press Branch, 1926-1927 etc., Crittenberger Papers, 1-2.

[100]Board of Officers to Adjutant General, Sub: "A Mechanized Force," TDS, 1 Oct. 1928, File AG 537.3 Proceedings: Board of Officers Appointed to make Recommendations for Development of a Mechanized Force, Box 2705, RG 407 and Maj. Allen Fletcher, Sub: "Present Developments of Mechanized Forces by Major Military Powers and Respective Doctrines as to Their Roles," TDS, 1 Mar. 1931, File AWC 377-23, Army War College Curricular Files, USAMHI. Hereafter referred to as AWC Curricular Files.

Chaffee would remain closely involved with mechanization, becoming in short order one of its leading advocates. He became a convert to mechanization almost by accident. Commissioned into the cavalry from West Point in 1906, Chaffee was an avid horseman. His skills earned him a place on the 1911 United States Equestrian Team at the London International Horse Show.[101] Chaffee did not see combat in the First World War, but he served overseas as a General Staff officer. In 1927, the Chief of Cavalry wanted to reassign Chaffee to the Cavalry School Equitation Department but Chaffee demurred and went to the General Staff instead.[102] He knew nothing of mechanization when he reported to the G-3, but his work on the General Staff's second mechanization board in 1928 convinced him of its potential. Watching the Experimental Mechanized Force, Chaffee realized that tying tanks to the walking infantry was a mistake. With the aid of a friend serving as an American military attaché in Britain at the time, Chaffee closely followed the development of the British Experimental Mechanized Force.[103]

Chaffee's biographer, Mildred Gillie, contends that Chaffee "saw in the Mechanized Force, the extension of the powers of cavalry through new and modern methods," and there is little reason to doubt this.[104] Chaffee knew that the cavalry arm might be eliminated unless it found ways to kept pace with the times.[105] As he once wrote a friend, "modern horse cavalry is becoming more and more machine gunned. When its guns are in action, it moves at infantry pace."[106] Chaffee recognized that some within the arm would resist mechanization, but Gillie insists "he was not prepared for the bitterly obstructive tactics of his opponents, which dogged the development of the mechanized

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[101]Gillie, 27.
[102]Ibid., 29. Gillie incorrectly identifies the Chief of Cavalry of Cavalry in 1927 as Maj. Gen. Malin Craig. Craig's tour ended in March 1926 when Maj. Gen. Herbert B. Crosby replaced him in that capacity. Gillie gave no indication why Chaffee turned down the assignment at Fort Riley in favor of General Staff duty.
[103]Nenninger, 91-92.
[104]Gillie, 46.
[105]Ibid., 45.
[106]Lieut. Col. Adna R. Chaffee, Jr., to Deputy Chief of Staff, Sub: "Organization, Equipment and Funds for the 1st Cavalry (Mecz.)," TD, 22 Apr. 1935, File 322.02 Cavalry Regiment (Mecz.), Box 6, RG 177, 2.

cavalry."[107] Chaffee held sufficient confidence in mechanization that by 1931 he began cutting his ties to the horse cavalry. While the future of mechanization in the cavalry hung in the balance, the commanding general of the 1st Cavalry Division, primarily a horse cavalry organization, offered Chaffee a choice assignment as his chief of staff. Chaffee turned down the general, remaining instead in his General Staff post. His action sent an unmistakable message to the horsemen.[108]

Throughout the interwar, Chaffee remained convinced that mechanization would prevail in the end. As he told another mechanized cavalryman in 1939, "if we keep driving along and demonstrating the combat power of mechanized cavalry, it won't be long before somebody in high place will recognize it." Chaffee evangelized the idea of mechanized cavalry. He always made sure that the Chief of Cavalry was wined, dined, and carefully handled during his visits to the mechanized cavalry.[109] Of the numerous setbacks he encountered, Chaffee added, "My main concern is to keep the sense of these setbacks from reaching to the younger fellows who are enthusiastic and visionary."[110] As a reformer, Chaffee demonstrated that he identified the cavalry with mobile combat power and not just with the horse. He looked to the future, but he realized that under the prevailing conditions progress would be slow and difficult.

In the late 1920s, Maj. Gen. Herbert B. Crosby, the Chief of Cavalry dutifully supported the General Staff's plan for a permanent mechanized force. Only Maj. Gen. Stephen O. Fuqua, the Chief of Infantry, raised objections; he feared the plan would rob his own branch of its control over tanks and tank development. Davis approved the plan over Fuqua's objections. In the meantime, the deadline for fiscal year 1930 budget

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[107]Gillie, 51.
[108]Ibid., 57.
[109]Ibid., 120-122
[110]Brig. Gen. Adna R. Chaffee, Jr. to Lieut. Col. Willis D. Crittenberger, TL, 1 Jun. 1939, File Correspondence, Jan.-Jun. 1939, Box Correspondence, 1939-1941, Crittenberger Papers.

submissions had already passed, so Davis delayed the plan's implementation for a year.[111] The report called for $1 million in new equipment procurement for the mechanized force each fiscal year from 1931 through 1933.

Unfortunately, the Stock Market Crash and the onset of the Depression intervened before this plan could be submitted to Congress.[112] In February 1930, Brig. Gen. Edward L. King, the new chief of the Operations Section of the General Staff, admitted a lack of money destroyed any chance to implement the plan. He suggested another study to reconsider the proposal in the light of the new economic realities.[113] The new board called for the creation of a much smaller mechanized force. The new organization included a single light tank company, a machine gun company, an armored car troop, and supporting units. (See Figure 3.2) All told, the unit would have about 550 men, fifteen tanks, ten armored cars, and six 75mm artillery pieces. The General Staff would control this unit, like it did its predecessor to avoid the delicate issue of subordination to a single arm.

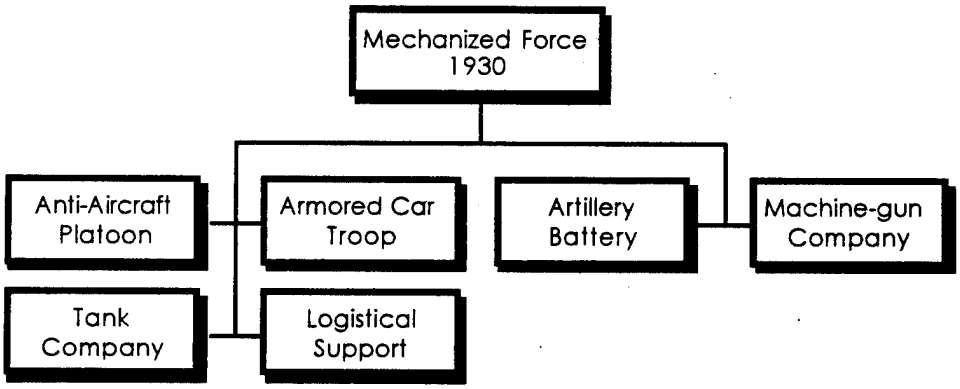

Figure 3.2 The 1930 Mechanized Force

In November 1930, the War Department announced this force as a "tactical laboratory." In the directive creating the Mechanized Force, the War Department

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[111]Maj. Allen Fletcher, "Present Developments of Mechanized Forces by Major Military Powers and Respective Doctrines as to Their Roles," TDS, 1 Mar. 1931, File AWC 377-23, AWC Curricular Files; Nenninger, 91-94; and Johnson, 220-227.
[112]Killigrew, IV-14 to 15.
[113]Brig. Gen. Edward L. King, G-3, to Chief of Staff, Sub: "Revision of Project for Mechanized Force," TDS, 21 Feb. 1930, File AG 537.5 Mechanized Force, Box 2702, RG 407.

specifically assigned it cavalry missions. It was to seize distant points ahead of an advancing army, conduct turning and enveloping attacks on enemy flanks, guard the flanks and rear of friendly units, exploit penetrations of enemy defenses, and serve as a counterattack force. The General Staff reserved the penetration of an organized defense specifically for the infantry and its tanks.[114] This policy removed a barrier to mechanization but also led to a diffusion of effort. By 1930, Army mechanization policy began to diverge into separate efforts tied to traditional cavalry and infantry missions.

With the help of Chaffee, the 1930 General Staff selected an experienced cavalryman, Col. Daniel Van Voorhis, to command the Mechanized Force.[115] This did not please Van Voorhis, who at the time was commanding a horse cavalry regiment in Texas. He had little knowledge of mechanical things, but after a few months he found it grew on him.[116] While some contemporaries ascribed to Van Voorhis the lesser role of organizer and administrator, he still stands out as an increasingly consistent and powerful advocate of mechanization.[117] Like Chaffee, he firmly believed that mechanization introduced an important new development into the conduct of war. Still, he was no revolutionary. He made this clear in an address to Army War College in 1937, when he stressed mechanization as an adjunct to not a replacement for, the traditional arms. He carefully pointed out the reasons why European armies pursued different courses on mechanization and provided a very broad overview of the development of U.S. Army's own policy. Amid debate over appropriate missions for mechanized units, Van Voorhis expressed reservations about using it to perform missions not traditionally ascribed to cavalry, such as attacks on strong defensive positions.[118] In May 1938, when Chaffee grew depressed by a

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[114]Fletcher, 30-31,39.

[115]Gillie,39.

[116]Ibid.; and Robert K. Grow, "The Ten Lean Years: From the Mechanized Force (1930) to the Armored Force (1940)," TD, Feb. 1969, The Robert K. Grow Papers, USAMHI, 4-5. Hereafter referred to as the Grow Papers.

[117]Robert W. Grow, to Timothy Nenninger, TDS, 10 Jun. 1967, Letter in the possession of Dr. Nenninger, and James H. Polk, interview by Lieut. Col. Roland D. Tausch, 1971-72, TDS, Senior Officer Oral History Program, USAMHI.

[118]Brig. Gen. Daniel Van Voorhis, "Address to the Army War College entitled 'Mechanization'," TD, (1937), File 700.3 Monthly Staff Meetings 1938-39, Box 1 Maneuvers 1938-39, RG 177, Records of the Mechanized Cavalry Board, NARA, Washington, D.C., 1, 15-16,21.

series of setbacks in his efforts to expand mechanization, Van Voorhis counseled: "The only consolation I have ever received is from the thought that never in the history of the Army has the introduction of anything new been accepted without a long, vigorous fight."[119] This reformer understood full well the difficulties he faced. Like Chaffee, Van Voorhis believed mechanization held the key to the cavalry's survival and worked to bring about necessary changes. Still, he never completely abandoned his hope that the horse would retain a niche in modern war.

The new commander's introduction to his unit left the old mounted warrior less than impressed. When Van Voorhis arrived at Fort Eustis, where the Mechanized Force was assembling, he met his new executive officer, Maj. Sereno Brett, an infantry tank officer and a veteran of the First World War Tank Corps. Brett conducted a demonstration attack for Van Voorhis leading M-17 tanks on foot using signal flags. This was hardly what the new commander had in mind for his cavalry-like command. The spectacle convinced Van Voorhis and his operations officer, Maj. Robert K. Grow — another cavalryman — that the first task was to inculcate the Mechanized Force with a cavalry mentality. Everything in the unit would have to be capable of high-speed movement, and its leadership would have to learn to think and command mounted. [120]

During the next twelve months while Van Voorhis and Grow struggled to train the composite Mechanized Force to that standard, other cavalrymen closely followed their efforts. Now a major in the Office of the Chief of Cavalry, Patton corresponded with the commander the armored car troop and kept a file of newspaper clippings on the Mechanized Force. He clearly was interested in how mechanization was working out in practice.[121] In the pages of *The Cavalry Journal*, Lieut. Col. K.B. Edmunds argued that the Mechanized Force would complement, instead of replace, the older arms. It was a powerful weapon

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[119]Van Voorhis in letter to Chaffee quoted in Mildred H. Gillie, *Forging the Thunderbolt: A History of the Development of the Armored Force*, (Harrisburg, PA: The Military Service Publishing Company, 1947), 118-119.
[120]Gillie, 39 and Grow, "The Ten Lean Years," 4-5.
[121]Blumenson, 964.

well suited to fill the old role of heavy cavalry, but such a specialized force could not do the work of traditional, and more adaptable, cavalry and infantry. He lamented "the tendency of the existing arms...to adapt the new arm to our present tactics," warning his readers that "it is important that we do not allow its wings to be clipped by too great conservatism." Edmunds suggested that the infantry and cavalry should change their tactics "to fit the characteristics of the mechanized force."[122]

What he proposed was nothing short of a revolution in the tactics and thinking of the Army. Edmunds' article contained a particularly prophetic passage in which he warned cavalrymen:

> Our Cavalry is instinctively hostile to any machine which may supplant the horse, and inclined to disparage its effect. We are retreating to mountain trails and thick woods, hoping that no fast tank can follow. Our policy, on the contrary should be to encourage the new arm, experiment with it, and to bring out its characteristics...since the place of the new arm in the army team, its missions and tactics are closer to those of Cavalry than they are to any other arm. The cavalryman is best able to understand its potentialities. It is improbable that a machine will ever be invented that is more efficient for all military purposes than the horse. But,...Cavalry missions and Cavalry tactics will remain, and the mechanized force will act in conjunction with the Cavalry.[123]

Other officers added their voices to the debate about the capabilities and limitations of armored vehicles. In April 1930, Patton and Benson teamed up to address the implications of mechanization for the cavalry. They argued that too little attention had been given to the limitations of armored fighting vehicles, especially when compared with horse cavalry. They observed that the British experiments had shown that, even with radios, it was difficult to command and control mechanized units. The authors noted that obstacles such as streams that "appear trifling to a well-mounted cavalryman often put a serious handicap upon machines." Nonetheless, they insisted the cavalry could profitably employ armored vehicles. They suggested that the tank should be to cavalry what cavalry was to infantry, namely a special purpose auxiliary. Armored fighting vehicles, Patton and

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[122]Lieut. Col. K.B. Edmunds, "Tactics of a Mechanized Force: A Prophecy," *CJ* 39 (160 Jul. 1930): 414-417.
[123]Ibid., 411.

Benson believed, would "conserve the strength of mounted troops" and enhance their combat power.[124] Benson's heresy was over.

Brigadier General Hamilton Hawkins , the archetype of the conservative horseman, weighed in to the debate. Though retired, he was a particularly dangerous foe because of his reputation as "one of our foremost authorities on Cavalry tactics." His 1931 article attacking the Mechanized Force encapsulated the argument Hawkins — and his fellow conservatives — would make repeatedly over the next ten years. He began with the bold assertion that mechanized troops could never replace cavalry on any ground. Comparing the two, he found that mechanized cavalry had numerous shortcomings. For example, he argued that mechanized units could not hold ground because any stationary tank quickly would be destroyed by artillery fire. Hawkins believed that mechanized units were inherently fragile and could be used only once in combat before requiring refitting. He also found mechanized units to be especially vulnerable to encirclement and to air attack. Mechanized units inevitably would outrun both their supplies and supporting troops. They would be too expensive to maintain in peacetime and too slow to form in war. In a timeworn tactic, he attacked the credentials of critics of horse cavalry. Hawkins asserted they lacked the "considerable experience" and "thorough knowledge" of cavalry required to judge its merits.[125]

Even Chief of Staff Summerall contributed to *The Cavalry Journal*'s exchange on mechanization and the future of the arm. After laying out the broad contours of the arguments for and against mechanization, he articulated a position at once moderate and conservative. He concluded that new developments such as mechanization "should receive constant attention; but they should not be permitted to jeopardize the efficiency of arms that have been subjected to the test of battle."[126] Summerall considered mechanization to be

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[124]Patton and Benson, "Mechanization and Cavalry," 236-239
[125]Brig. Gen. Hamilton S. Hawkins, "Cavalry and Mechanized Force," *CJ* 40 (167 Sep.-Oct. 1931): 19-23.
[126]Gen. C.P. Summerall, "New Developments in Warfare," *CJ* 40 (163 Feb. 1931): 8-10.

secondary to the maintenance of the cavalry's existing capabilities. Even the chief of staff was arguing for institution stability.

The discussion of mechanization extended to the Army's schools. Maj. J.W. Anderson, a field artillery officer, told the faculty and students of the Army War College that the maintenance and operating costs of vehicles were significantly lower than those of animals. He noted that public confidence in and familiarity with vehicles was rising. Anderson observed "the care of animals is a passing art but most of our men know something about motors and are keenly interested to learn more."[127] By implication, Anderson was making a case for mechanization and motorization of the cavalry.

As he ended his tour as the Chief of Cavalry, Crosby expressed his feelings about mechanization to students and faculty of the Cavalry School. He attacked the opponents of mechanization within the arm. Crosby argued that mechanization was "the greatest friend of cavalry just as the air service is.... Mechanization will create a greater demand for Cavalry than ever before."[128] His comment on the value of the airplane to cavalry reflected the widely-held belief that aircraft freed the arm of the difficult task of long range reconnaissance, allowing them to focus on close reconnaissance and tasks in the main battle area. No doubt some cynic in the audience said to himself the last thing cavalry needed was more friends like the Air Corps! Other senior officers help spread the word. The Chief of the Operations Section of the General Staff drew direct parallels between tanks and the traditional forms of cavalry in his talks on mechanization. He told his audiences that the Mechanized Force was specifically tested how well tanks could fill the light cavalry role.[129] Maj. Gen. Edward L. King's remarks were so direct, they demanded traditional cavalrymen sit up and take notice of the new force.

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[127]Maj. J.W. Anderson, "Motorization of Armies," Address to Lecture delivered at the Army War College, Washington, D.C., 12 Jan. 1931, TD, File AWC 377-10, AWC Curricular Files, USAMHI, 7-9.
[128]Truscott, 102.
[129]Maj. Gen. Edward L. King, Address to TD, File Lecture of Mechanization in the Army by Brig. Gen. King, War Department G-3,Box Maneuvers, 1938-39, RG 177, Records of the Mechanized Cavalry Board, 4-7.

CHAPTER 4.

MODERNIZING THE CAVALRY

> It has been noticed for sometime that a slight rift has appeared between horse and mechanized cavalry....If this rift is permitted to exists and develop, the time is not to far distant when an attempt will be made to separate mechanized cavalry from horse cavalry completely.
>
> Brig. Gen. Guy V. Henry, Jr.
> President of the Cavalry Board, 1937[130]

> The employment of mechanized cavalry differs very little, if at all, from the employment of horse cavalry, except as might be expected to result from the substitution of the machine for the horse.
>
> Brig. Gen. Adna R. Chaffee, Jr.
> Address to the Army War College, September 1939[131]

After Gen. Douglas MacArthur replaced Summerall as chief of staff in November 1930, the struggle within the War Department of mechanization policy quickly reached a boiling point. The infantry demanded control over the Mechanized Force since it included tanks which, by law, must belong to the infantry. In response, the cavalry and other branches objected to losing control of their contributions to the force. With internal dissension over mechanization detracting from his efforts to enlarge the Army, MacArthur moved to diffuse tensions by decentralizing mechanization.[132] Maj. Gen. George Van Horn Moseley, the Deputy Chief of Staff and the Army's senior cavalry officer, drafted the new policy for MacArthur. On 1 May 1931, the War Department issued a new policy statement that framed the cavalry's debate on mechanization for the next nine years. It

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[130]First Indorsement, 30 July 1937 to Maj. Gen Leon B. Kromer to President of the Cavalry Board, Sub: "Mechanized Cavalry Board," TDS, 1 July 1937, File 334.3, Bx12, RG177.
[131]Address of Brig. Gen. Adna R. Chaffee, Jr. to the Army War College, TD, 29 September, 1939, Bx1, Mechanized Cavalry Board, Maneuvers, 1938-1939, RG177, Records of the Mechanized Cavalry Board.
[132]Johnson, 270-271.

began with the observation that improvements in tank mobility made it possible to use them in missions "far beyond the normal missions assigned to the infantry."[133] Turning to the cavalry, MacArthur noted:

> There has grown-up in the public mind a very natural conception that cavalry must include the horse. Modern firearms have eliminated the horse as a weapon, and as a means of transportation he has generally become, next to the dismounted man, the slowest means of transportation. In some special cases ordnance of difficult terrain, the horse, properly supplemented by motor transportation, may still furnish the best mobility, and this situation is properly borne in mind in all our plans.[134]

He reiterated the missions of cavalry, then announced that the Mechanized Force would be reorganized as a cavalry regiment with supporting artillery and support units attached. He did not stop there. MacArthur directed the entire arm be reorganized and reequipped to enable it to better perform its mission. He observed that:

> This may require at least two types of cavalry regiments. One (horsed) in which the horse and mule may remain only where they cannot be replaced by the motor.... [and] A second type of cavalry (mechanized) in which the horse and mule shall have disappeared entirely.[135]

After affirming infantry's control over tanks, the letter listed the assumptions that were to govern mechanization policy and planning: tanks would be unavailable in large numbers until well after mobilization; their use would be limited to short periods of time under special conditions; tank maintenance would be a problem.[136] This set of assumptions effectively defined the limits of debate on mechanization. So long as they served as the basis for all planning and policy, mechanization would continue to remain a limited affair. The policy also made it clear to even the most recalcitrant horseman that the cavalry would have to accommodate some measure of mechanization.

Even before announcing the new policy, MacArthur made sure the cavalry understood his concerns about the arm. During a meeting with the new Chief of Cavalry,

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[133]Gen. Douglas MacArthur, Sub: "General principles to govern in extending mechanization and motorization throughout the Army," TD, 1 May 1931, File 322.02 Cavalry Regiment (Mecz.), Box 6, RG 177, 1.
[134]Ibid., 2.
[135]Ibid., 2-3.
[136]Ibid., 3-4.

Maj. Gen. Guy V. Henry, Jr., MacArthur called him to a window, pointed at a car outside and said, "Henry, there is your cavalry of the future."[137] Maj. A.D. Surles published an account of his discussion with MacArthur on the arm's future. Surles noted that the chief of staff believed the horse remained an important means of providing mobility, but the cavalry was behind the times and deserved the criticism it faced since World War. He specifically felt it was deficient in firepower, mobility, and communications equipment. Moreover, it was becoming mentally slow. Surles added "in all our estimations, we tended to place ourselves well up into actual contact, under conditions that favored our role, and with probable solutions colored by historical records."[138] Surles' assessment was right on the mark. In their efforts to train the finer points of their missions, cavalrymen had overlooked the preliminary events which ultimately determined their ability to perform in combat. Their ability to provide detailed reconnaissance information or successfully turn an enemy's flank depended upon horse cavalry enjoying a relative advantage in tactical mobility. Mechanization made that assumption increasingly suspect.

MacArthur's new policy heralded major changes for the cavalry. Henry supported his chief. He welcomed mechanization, believing vehicles could replace horses without changing the mission of cavalry.[139] For his part, Van Voorhis objected to the decision, arguing that branch partisanship was bound to disrupt progress in mechanization. He lobbied unsuccessfully for the continuation of his Mechanized Force independent of any single arm's control.[140] In a surprising move, Fuqua, the Chief of Infantry, raised objections to the weakening of horse cavalry detailed in the new policy. He argued that the acceptance of mechanization by the cavalry would be tantamount to a concession that it and the horse were on the decline.[141] The press reacted favorably to MacArthur's new policy.

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[137]MacArthur quoted in Maj. Gen. Guy V. Henry, Jr., "Unpublished Autobiography with new supplement," TD, (Dec. 1944 ?), Box 2, Henry Papers, USAMHI, 65.
[138]Maj. Alexander D. Surles, "Cavalry Now and to Come," *CJ* 40 (164 Mar.-Apr.. 1931): 5-6.
[139]Nenninger, 111 and Grow, "The Ten Lean Years," 5.
[140]Nenninger, 110-111.
[141]Maj. Gen. Stephen O. Fuqua, Chief of Infantry, to Maj. Gen. George V. H. Moseley, Deputy Chief of Staff., Sub: "Organization - Mechanized Force," TDS, 22 Apr. 1931, File AG 537.3 Mechanized Force, Box 2703, RG 407.

A leading news magazine ran an article entitled "From Sabers to Monkey Wrenches." The Louisville *Courier Journal* quipped that "'Boots and saddles[142] ' now means 'crank 'er up.'" *Popular Science* featured an article headlined, "Exit the Cavalry, Enter the Tanks."[143]

After MacArthur ordered the creation of mechanized cavalry, the Cavalry School issued a report calling for the modernization of horse units so that they might be better prepared to fight against mechanized units. It concluded that the arm was approaching "a critical and probably decisive stage in its existence and that a proper change in its armament and equipment at the present time will deeply influence its future status."[144] It was clear to all that a major change was underway. Whether it was the dawn of a new cavalry or the twilight of the old was another matter.

In October 1931, the secretary of war selected the historic 1st Cavalry Regiment to become the new mechanized cavalry regiment.[145] Recognizing how this decision would be received by some within the regiment, Henry himself notified the regimental commander. "It is with a feeling of sadness that we see this change in our oldest mounted organization," he wrote, but he also added that it was only fitting the 1st Cavalry be the first mechanized cavalry regiment. Henry even suggested that this would be a point of pride in a few years.[146]

Henry was the first Chief of Cavalry to face the issue of mechanization head on. He had all the marks of an old-school cavalryman. Commissioned in 1898, he graduated near the bottom of his small West Point class. After a brief stint in the infantry during the Spanish-American War, Henry served with cavalry in the Philippines. Henry participated in the 1912 Olympics as a member of the United States Equestrian Team. He also

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[142]The bugle call used to call cavalry to action.
[143]Gillie, 48-49.
[144]Academic Division, The Cavalry School, "A project embodying suggestions and recommendations for change in and additions to the armament and equipment of the cavalry regiment and reasons therefor," TD, 25 Sep. 1931, Box Correspondence, 1938 Jun.-Aug, Crittenberger Papers.
[145]Brig. Gen. James F. McKinley, Adjutant General, to numerous, Sub: "Disposition of the Mechanized Force," TDS, 3 Oct. 1931, File 322.02 7th Cavalry Brigade (Mechanized), Box 7c, RG 177.
[146]Maj. Gen. Guy V. Henry, Jr., to 1st Cavalry Commander, Sub: "Mechanization of the 1st Cavalry," TL, 17 Nov, 1931, File 322.02 First Cavalry (Mechanized), Box 6, RG 177.

graduated from the French Cavalry School and, for a time, directed equitation instruction at the Cavalry School.[147] For reasons he left unrecorded, Henry did not want to be Chief of Cavalry. Summerall pressured him to take the job. Henry found no joy in his first months on the job.[148] The beating the horse took in the press coverage of the Mechanized Force hurt the new Chief of Cavalry.[149]

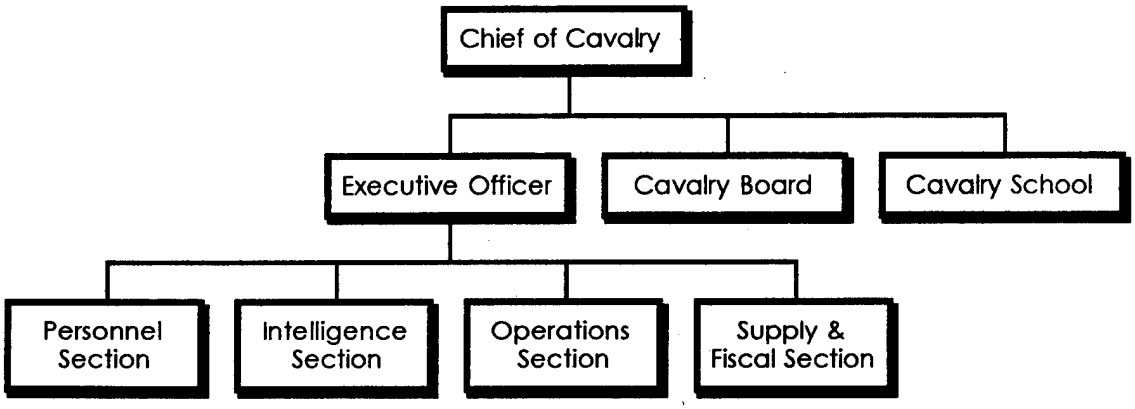

Figure 4.1 Organization of the Office of the Chief of Cavalry, 1935. The clerical staff is not depicted.

By the 1930s, the chief appeared to be a powerful figure. After all, he held the rank of major general, had direct access to the chief of staff, and was responsible for cavalry officer assignments, doctrine, organization, and equipment. A small staff under the chief's executive officer assisted him with these tasks. Each chief made minor changes in organization of his staff, but it generally broke down into functional sections. In 1935, for example, Maj. Gen. Leon B. Kromer divided his staff into four sections. (See Figure 4.1) A lieutenant colonel managed officers assignments from the Personnel Section. In the Intelligence Section, a major monitored cavalry developments in other armies. The Supply and Fiscal Section employed a lieutenant colonel and a major in monitoring the arm's budget interests and equipment requirements. Operations was the final section. A colonel

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147George W. Cullum, *Biographical Register of the officers and graduates of the United States Military Academy at West Point, New York since its establishment in 1802*, (1890-1940).
148Henry, "Unpublished Autobiography with new supplement," 64.
149Blumenson, 966-967.

and a pair of majors wrote doctrine, monitored training, authored its table of organization, and represented the arm in War Department war planning circles.[150]

The Cavalry Board and the Cavalry School at Fort Riley also assisted the chief. The chief's travel budget and skill at correspondence to some degree limited his ability to supervise or take advantage their operations. The Cavalry Board consisted of a group of senior officers usually drawn from the faculty and staff of the school. The chief referred issues to this body for detailed study. While their recommendations were not binding, the opinions of these cavalrymen carried great weight.[151] In addition to his official duties, the Chief of Cavalry was the president of the United States Cavalry Association. In the latter capacity, the detailed his staff intelligence officer to serve as the secretary-treasurer of the association and the editor of *The Cavalry Journal.*

Despite his apparent power, Henry found himself hamstrung by forces on all sides of the mechanization question. He faced the widespread expectation within the Army's hierarchy that the cavalry was hostile to the whole idea. The horsey set's vocal opposition and off-hand dismissal of mechanization's potential bore responsibility for this expectation. By design the War Department circumscribed Henry's influence over the program. It stationed the mechanized cavalry at Fort Knox, far from both Washington and Fort Riley. It gave the Fifth Corps Area Commander responsibility for the supervision of the mechanized cavalry's organization, training, and equipment. The instructions limited the role of the Chief of Cavalry to inspections and making recommendations.[152]

The fact that Moseley, the Army's Deputy Chief of Staff, closely monitored the arm's progress on mechanization further complicated Henry's position. He met privately with Moseley in July 1931 to discuss the mechanized cavalry regiment's proposed table of organization. After the meeting, Henry reassured Moseley that the cavalry would leave no

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[150]File 322.02 Office of the Chief of Cavalry, Box 7a, RG 177, contains charts and documents that detail changes in the Office of the Chief of Cavalry.
[151]Col. R.J. Fleming, "Mission of the Cavalry School with Comments on Modern Cavalry Training," *CJ* 38 (154 Jan. 1929): 55.
[152]Johnson, 312-314.

stone unturned in its effort to make mechanized cavalry a success. Henry conspicuously tried to avoid creating the impression that he was meddling in the mechanized cavalry. In deference to Van Voorhis' expertise and fearing that his involvement would be misinterpreted, Henry rubber-stamped the proposed tables of organization for the mechanized cavalry regiment.[153]

Just as the proponents of mechanization within the General Staff acted to minimize Henry's influence, the horsey set was busy doing the same. Henry personally felt that "die-hard horse cavalrymen resisted every single change" he tried to make. As might be expected, they fought him the hardest over the conversion from horse to mechanized units of the 1st and later the 13th Cavalry Regiments.[154] There exists little evidence directly linking the conservatives to the halting progress toward conversion in either case, but the connection is both logical and consistent with the political climate within the cavalry. Presumably, the conservatives efforts manifested themselves in intrigues with like-minded individuals in the General Staff, press corps, and Congress.

Personally, Henry welcomed the creation of mechanized cavalry.[155] Still, he walked a fine line between the two sides of the debate. If he overemphasized the horse, the War Department would eventually cut the cavalry out of mechanization, its best hope for institutional stability for the future. If he alienated the horsemen, the loss of their support would weaken Henry's position within the General Staff. In both cases, the arm would suffer in the fierce competition for resources. Witness his comments to the Commandant of the Cavalry School in 1933:

> The Chief of Cavalry well knows that both he and the Cavalry School have by certain elements been accused of "pro-mechanization" and "anti-horse" while by other elements they have been accused of "pro-horse" and "anti-mechanization," whereas the Chief of Cavalry and the Cavalry School have to the best of their ability attempted to be impartial in this matter — seeking only the good of the whole.[156]

153Maj. Gen. Guy V. Henry, Jr., Chief of Cavalry, to Maj. Gen. George Van Horn Moseley, Deputy Chief of Staff., TLS, 3 Jul. 1931, File AG 537.3 Mechanized Forces, Box 2701, RG 407.
154Henry, "Unpublished Autobiography with new supplement," 64-55.
155Grow, "The Ten Lean Years," 7.
156Maj. Gen. Guy V. Henry, Jr., Chief of Cavalry, to Brig. Gen. A.G. Lott, Commandant of the Cavalry School, TL, 27 Apr. 1933, File 322.02 Second Cavalry, Box 6, RG 177.

Under these conditions and probably out of his personal convictions, Henry chose to beat the drum for a single cavalry combining horse and mechanized cavalry. One of the channels available for him to make this case was *The Cavalry Journal.* In March 1932, he laid out his vision of the arm's future, explaining the plans for mechanized cavalry. He allowed that this was an experiment, and only experience, budgets, and time would tell how far the mechanization of the cavalry would proceed. Henry described a future battle in which cavalry armored cars ranged ahead of the advancing American army searching out the foe. The mechanized cavalry came next, racing ahead to seize key terrain once the enemy had been found. The horse cavalry followed, rushing forward "by the most rapid means of transportation available." Once in contact, Henry saw the horsemen fixing the enemy while mechanized cavalry struck their flanks. After the army's main body came up, both types of cavalry would shift to the flanks where they would cooperate in protecting the main force.[157]

As chief, Henry used his official appearances to spread the single cavalry gospel. His remarks to the New York State National Guard Officer's Association in late 1933 repeated his earlier testimony before Congress, where he argued that, if mechanized units could perform cavalry missions, it was only logical that cavalrymen should lead them. While armored fighting vehicles lacked all the abilities of the horse, he continued, "whenever usable, they are a weapon of tremendous power and most essential to the Cavalry of a modern Army." He maintained that neither horse nor mechanized cavalry was sufficient by itself. Each had its special capabilities and limitations. Therefore, Henry concluded that "both in proper proportions are needed and both must be used in cooperation and coordination with each other."[158] Beset by opposition from the horsemen, reformers, a skeptical General Staff, and mechanized cavalry officers, Henry struggled to animate his concept of a single cavalry.

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[157]Maj. Gen. Guy V. Henry, Jr. (Chief of Cavalry), "The Trend of Organization and Equipment of Cavalry in the Principle World Powers and its Probable Role in the Wars of the Near Future," *CJ* 41 (170 Mar.-Apr. 1932): 8-9.

[158]"Address of Major General Guy V. Henry, Jr., Chief of Cavalry," *CJ* 43 (181 Jan.-Feb. 1934): 54-55.

Some got the message. Before mechanized cavalry had proven itself to many Regular officers, Maj. Albert Stackpole of the Pennsylvania National Guard proposed the Army adopt a cavalry reconnaissance regiment organization that combined an aviation squadron, an armored car squadron and a horse squadron.[159] While nothing came of his ideas, Stackpole demonstrated that progressive thought on the cavalry's future reached beyond the Regular Army.

In April 1934, Henry left the Office of the Chief of Cavalry. He had expected to be retired — at the rank of colonel, as departing chiefs of arms used were — but instead received the rare honor of promotion to permanent brigadier general on continued active duty. Henry briefly commanded the mechanized cavalry brigade before assuming the duties of Commandant of the Cavalry School. There he remained until his retirement in 1939. Looking back on his service as Chief of Cavalry, Henry believed he had made strides toward modernizing the arm and convincing skeptics of the efficacy of the combination of horse and mechanized cavalry.[160] Others apparently agreed. In Grow's opinion, Henry was "mechanized minded and did as well as could be hoped."[161]

As the 1st Cavalry learned its fate, the War Department created the "Detachment for Mechanized Cavalry Regiment" out of elements of the defunct Mechanized Force. In November, the detachment moved to Fort Knox, Kentucky, where they began preparing the garrison for the regiment.[162] Fort Knox, a First World War mobilization post, lacked the facilities required for the new unit. The detachment's soldiers adapted temporary wartime buildings while awaiting the construction of permanent ones.[163]

Political forces intervened to slow the creation of the mechanized cavalry regiment. The 1st Cavalry had been stationed at Fort D.A. Russell near Marfa, Texas. Local

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[159]Maj. Albert H. Stackpole, "The First Reconnaissance Regiment," *CJ* 41 (170 Mar.-Apr. 1932): 44.
[160]Henry, "Unpublished Autobiography with new supplement," 54, 65, 67-68.
[161]Grow, "The Ten Lean Year," 8.
[162]Ibid., 5 and Nenninger, 134.
[163]Robert K. Grow, "The Ten Lean Years: From the Mechanized Force (1930) to the Armored Force (1940): Part 2," *ARMOR* 96 (2 Mar.- Apr. 1987): 25. Hereafter referred to as Grow, "The Ten Lean Years, Pt. 2."

politicians feared the economic consequences of losing the unit at the height of the Depression. Their congressmen fought to reverse the War Department's decision, while Kentucky's delegation lobbied in support of the transfer. As a result, the regiment's move to Fort Knox hung in the balance for over a year.[164] Amid swirling rumors about converting a different horse regiment to a mechanized unit and repeated delays in the projected departure of the 1st Cavalry, the detachment at Fort Knox prepared for the eventual arrival of the mechanized cavalry regiment.[165] Grow and the staff labored on a provisional table of organization for the unit.[166] As commander of the Fort Knox detachment, Voorhis continued to stress the preservation of the cavalry spirit and mannerisms. At his insistence, the officers and troopers of the detachment clung to the horse cavalry's vocabulary and dress, including its shined boots and riding breeches. In training, Van Voorhis insisted that his subordinates "think mounted," as cavalrymen had to think faster than they moved; by comparison, a walking man has plenty of time to deliberate his every move, while the mounted man has only a fraction of that time.[167]

In early 1932 and with Henry's support, the War Department approved Grow's provisional tables of organization.[168] (See Figure 4.2) The mechanized regiment was designed to operate as an a complete unit; it could not be subdivided. Its success rested upon the coordinated, sequential employment of all its subordinate elements. The regiment's "covering squadron" included an armored car troop of ten vehicles and a scout troop with seven scout cars, small open-topped armored trucks that mounted a pair of machine guns and carried a handful of troops. The covering squadron provided intelligence to the regimental commander. Working in conjunction with the Air Corps, the armored car troop identified enemy positions and terrain that needed closer examination.

164Johnson, 316 and Nenninger, 138. The post was actually known as Camp Knox at the time, but for simplicities sake will be referred to as Fort Knox hereafter.
165Grow, "The Ten Lean Years," 11 and Nenninger, 135-137.
166Tables of organization are an important document that authorizes both the equipment and manpower of a military unit.
167Grow to Nenninger, TLS, 10 Jun. 1967.
168Grow, "The Ten Lean Years, Pt. 2." 27.

Patrols from the armored car troop ranged far ahead of the regimental main body, seeking out the enemy. The scout car troop accomplished this close reconnaissance using both mounted and dismounted techniques as the situation demanded.[169]

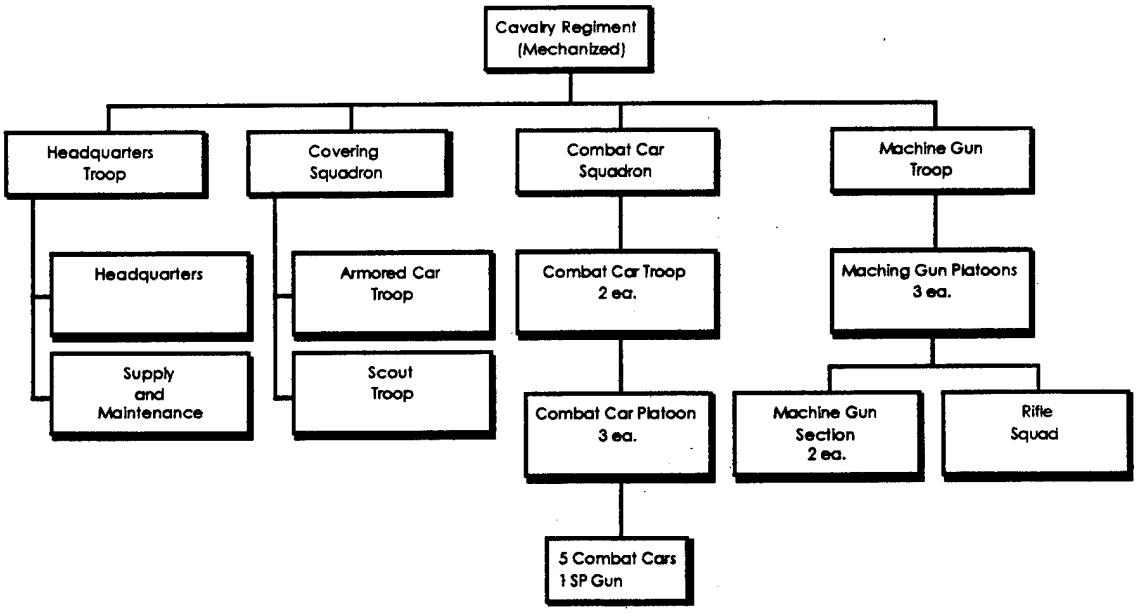

Figure 4.2 Mechanized Cavalry Regiment, 1931

Once the covering squadron located the foe, the remainder of the regiment swung into action. The "machine gun troop" consisted of six heavy machine gun teams and three rifle squads all carried by trucks. It provided the regiment's base of maneuver in the attack. It took up a position near the enemy and softened him up with its fires. While the enemy was so engaged, the "combat car squadron" delivered the killing blow. Combat cars were essentially light tanks. To get around the language of the National Defense Act of 1920, MacArthur's policy established that the cavalry would have tanks but call them combat cars. The squadron's six self-propelled guns neutralized antitank defenses with their direct fire, while its thirty combat cars slipped around the enemy flank and delivered the final

[169]Col. Daniel Van Voorhis, to Chief of Cavalry, Sub: "Methods for the Tactical Employment and the Training of a Mechanized Cavalry Regiment," TDS, 30 Oct. 1931, File 320.2 1st Cavalry (Mecz.), Box 3, RG 177, 2-3.

assault. A regimental headquarters troop containing staff, signal, and logistics elements rounded out the regiment's organization.[170]

In December 1932, the War Department and Texas and Kentucky's congressmen finally reached an accord that allowed the 1st Cavalry's transfer to Fort Knox. The General Staff promptly ordered Van Voorhis and his detachment to move to Marfa, collect the regiment, and return to Kentucky. After a long march, the detachment arrived in Texas. Its reception was not altogether what they feared it might be. While the regiment's officers scrambled to find new assignments in horse units, Grow felt the enlisted men seemed genuinely interested in their new task. On 2 January 1933, the 1st Cavalry packed up and departed for the return trip to Fort Knox.[171]

As the regiment began training as a unit, Moseley worked with the General Staff to ensure its success and its continued identity with the cavalry. He rejected a plan by the Operations Section of the General Staff to involve the regiment in the 1933 Fort Benning Maneuvers. The exercise was geared toward close reconnaissance tasks that Moseley knew a horse cavalry regiment could perform better. He told Van Voorhis, "I do not intend to see your first regiment (mechanized) killed off in a close-in tactical problem for which they are not equipped or organized." Moseley's conception of the future of mechanized cavalry was clear. As he told Henry, "my idea is to replace the horse by motor."[172] Moseley told the Chief of the Operations Section that he wanted the regiment to be a lean, highly mobile unit. "Let us take the first step first and get a Cavalry regiment (Mechanized)," Moseley wrote. Then, "when this has been accomplished, with the ability to preserve its mobility in all kinds of terrain and weather, then let us see if [other units can keep up]."[173] He stressed that mechanized cavalry was modern cavalry and gave Van Voorhis an unambiguous order to limit himself to cavalry missions. Moseley envisioned

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[170]Ibid., 2,4-5.
[171]Grow, "The Ten Lean Years," 33.
[172]Moseley quoted in Maj. Gen. Guy V. Henry, Jr., Chief of Cavalry, to Maj. Gen. George Van Horn Moseley, Deputy Chief of Staff., TLS, 3 Jul. 1931, File AG 537.3 Mechanized Forces, Box 2701, RG 407.
[173]Maj. Gen. George Van Horn Moseley, Deputy Chief of Staff, to G-3, Sub: "Cavalry Regiment (Mechanized)," TDS, 16 July (1931?), File AG 537.3 Mechanized Forces, Box 2701, RG 407.

the regiment operating independently, far from its supply base. He told Van Voorhis the regiment was not to be expected to return from a combat mission with most of its equipment. Just and horse cavalry often abandoned mounts who were injured, the mechanized cavalry would leave disabled vehicles behind. Clearly, Moseley's concepts of the regiment and its role in battle were bounded by his experience as a horse cavalryman.[174]

As the mechanized cavalry regiment took shape, the War Department continued to encourage a progressive philosophy within the cavalry. MacArthur's 1932 annual report acknowledged the declining utility of the horse but, in an important qualification, added that it was nonetheless uneconomical and unwise to replace the horse completely at that point. MacArthur expected it would take a good deal of time for cavalrymen to make the mental transition from horsemen to mechanized cavalrymen.[175] Indeed, his directive contained a powerful argument for retaining horse cavalry while the Army explored mechanization. The policy rested on the assumption that the Army must be prepared to enter the next war with only a handful of armored vehicles. With this likelihood in mind, the Chiefs of Cavalry began in 1931 to make major changes in the organization, equipment, and tactics of the horse cavalry regiment. The Chiefs intended to increase its mobility and combat power and give it the capability to operate against mechanized units.

Henry ordered the 2nd Cavalry at Fort Riley to try out a new regimental organization during 1932.[176] This test involved several changes. (See Figure 4.3) First, trucks replaced wagons in the regimental supply column. This brought universal acclaim. Cavalrymen expected the change to increase dramatically the mobility of horse cavalry by freeing it from its slow-moving wagons trains. The commander of regiment told the Chief

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[174]Gen. George Van Horn Moseley, Deputy Chief of Staff, to Col. Daniel Van Voorhis, TLS, 16 Feb. 1933, File 322.02 First Cavalry (Mecz.), Box 6, RG 177.,

[175]War Department, Secretary of War, Excerpts *from the Annual Report of the Chief of Staff in Report of the Secretary of War to the President,* by Gen. Douglas MacArthur, Government Printing Office, Washington, D.C., 1932, 82.

[176]Lieut. Col. E.M. Offley, Commander 2nd Cavalry, to Maj. Gen. Guy V. Henry, Jr., Chief of Cavalry, Sub: "Comments on Experimental Organization of 2d Cavalry," TD, 27 Feb. 1932, File 322.02 Second Cavalry, Box 6, RG 177. and Maj. B.F. Hoge, to Chief of Cavalry, Sub: "Experimental Organization, 1st Quarterly Report," TD, 12 Apr. 1932, File 322.02 Second Cavalry, Box 6, RG 177, 1.

of Cavalry that he was "impatiently awaiting the arrival of trucks and cars which in my opinion will extend our radius of action very materially."[177] Henry also ordered that commanders lighten the loads carried by mounts by transferring some baggage such as nonessential individual equipment from the rifle troops to the trains. To enhance the regiment's ability to respond quickly to changing battlefield conditions, Henry ordered the addition of horse-mounted radio sets and motorcycle messengers.[178]

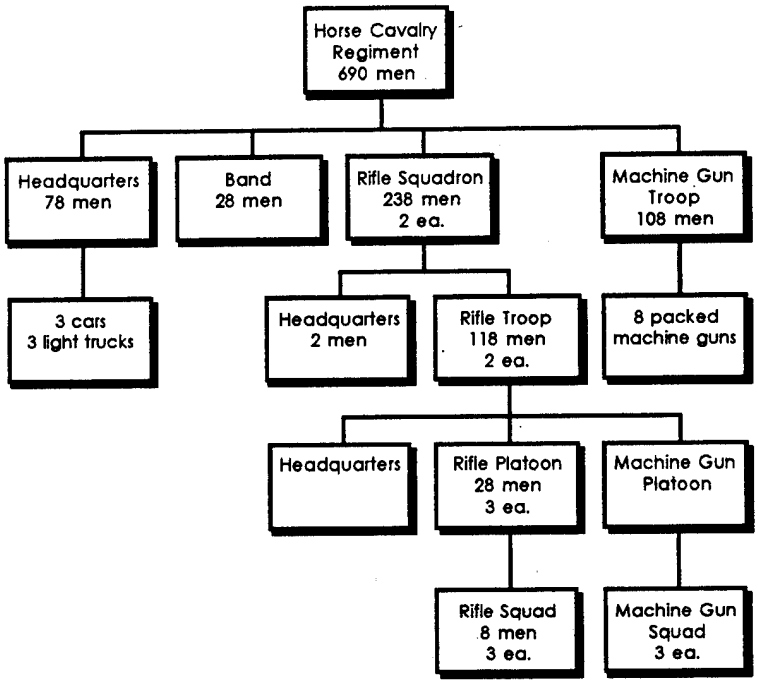

Figure 4.3 "Modernized" Horse Cavalry Regiment. The modernization program begun under Henry added a four-vehicle scout car platoon, motorized the supply column, and replaced the Machine Gun Troop's water-cooled .30 caliber machine guns with more capable .50 caliber weapons.

The reorganization added a four-vehicle scout car platoon to each regiment. The cavalry believed this platoon could conserve horseflesh by assuming responsibility for long-range reconnaissance.[179] In practice, most commanders used these vehicles as a

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[177]Col. C.H. Muller, to Maj. Gen. Leon B. Kromer, TL, 25 Mar. 1934, Box 2, The Leon B. Kromer Papers, USAMHI. Hereafter referred to as the Kromer Papers.
[178]Col. C.L. Scott, to Maj. Gen. Guy V. Henry, Jr., Sub: "Future Employment of Cavalry and the Proper Organization and Equipment Necessary Therefor," TDS, 10 Aug. 1933, File 322.02 Cavalry, Box 7b, RG 177.
[179]Col. Charles L. Martin, to Maj. Gen. Leon B. Kromer, TL, 26 Mar. 1934, Box 2, Kromer Papers.

mobile antitank reserve, because the Army until 1937 believed that their .50 caliber machine guns would be a great tank killer.[180] Its high rate of fire made it possible to hit moving vehicles and, at 500 yards, its standard ammunition could penetrate the armor of most contemporary tanks.[181] As a hedge against future improvements in the protection of tanks, the cavalry arm extracted a promise from the Ordnance Corps to develop special armor-piercing bullets.[182] Enamored with the .50 caliber machine gun, the Chief of Cavalry added eight of them to the horse regiment's machine gun troop. When packed on horseback, a trained crew could place its weapon into action in about twenty seconds. Many cavalrymen expected that by deploying .50 caliber machine guns across the front and depth of its zone of operations a horse regiment would not only be able to fend off enemy tanks, but also hunt them down and kill them.[183]

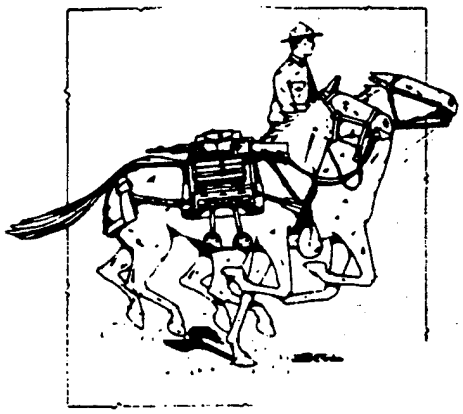

Figure 4.4 The Packhorse. Horse cavalry units used packhorses to transport heavy weapons such as the .50 caliber machine gun. The weapon, its ammunition, and accessories were broken down into separate loads. (from *The Cavalry Journal* Vol. 43 No. 184 Jul.-Aug. 1934, p. 21.)

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[180]Col. C.L. Scott, to Maj. Gen. Guy V. Henry, Jr., Sub: "Future Employment of Cavalry and the Proper Organization and Equipment Necessary Therefor," TDS, 10 Aug. 1933, File 322.02 Cavalry, Box 7b, RG 177.

[181]"The Cavalry Maneuvers at Fort Riley, Kansas, 1934," *CJ* 43 (184 Jul.-Aug. 1934): 5-6.

[182]Lieut. Col. Willis D. Crittenberger, to Col. R.E. McQuillin, TLS,24 Feb. 1938, File Correspondence, Jan.-May. 1938, Box Correspondence, 1935-1938, Crittenberger Papers.

[183]Col. C.F. Martin, "Influence of Mechanization, Motorization and Machine Guns on the Horse Cavalry Regiment's Tactics, Organization and Supply Methods," *CJ* 44 (189 May-Jun. 1935): 16-17; Col. Bruce Palmer, "Address of Col.. Bruce Palmer, First Cavalry (Mecz.)," Lecture delivered at the Army War College, Washington, D.C., 17 Oct. 1936, TD, File Lectures and Notes on Motorization and Mechanization, Box 1 Maneuvers 1938-1939, RG 177, Records of the Mechanized Cavalry Board, 2-3; and Brig. Gen. Hamilton S. Hawkins, "General Hawkins' Notes - The Combination of Horse Cavalry with Mechanized Cavalry," *CJ* 47 (209 Sep.-Oct. 1938): 461.

The Chiefs of Cavalry directed other steps to increase the firepower of the horse cavalry regiment. These efforts included experiments with towed mortars, attempts to get priority in the fielding of the new M-1 semiautomatic rifle, and an increase in the number and quality of the light machine guns. Indeed, these measures succeeded so well that even ardent mechanized cavalrymen believed the American horse regiment was twice as effective as it had been in 1916.[184] But was it powerful enough to compete with mechanized units?

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[184]Lieut. Col. Robert W. Grow, "New Developments in the Organization and Equipment of Cavalry," *CJ* 48 (213 May-Jun. 1939): 205-206.

CHAPTER 5.

TESTING MODERN CAVALRY

In 1934, the cavalry was ready to begin putting both the mechanized cavalry and the modernized horse cavalry regiment to the test. In Spring maneuvers at the home of the Cavalry School, Fort Riley, organizers hoped to answer two questions: could mechanization replace the horse cavalry and could horse and mechanized cavalry operate in conjunction with each other?[185] Given the significance of those two questions, the *Cavalry Journal* covered these maneuvers in detail.[186] While the exercise was still in its planning stages, the *Cavalry Journal* announced the maneuver's purpose, its plans to pit horse against mechanized cavalry, and its efforts to test combined horse-mechanized operations. With the Cavalry School participating in planning for horse-mechanized cooperation and preparing the horse cavalry to deal with the mechanized cavalry regiment, the editor proclaimed "these maneuvers afford an unusual opportunity to develop the combined use of our two types of cavalry."[187]

When all the participants had assembled at Fort Riley, Maj. Gen. Leon B. Kromer, the newly appointed Chief of Cavalry, made it absolutely clear he wanted the mechanized cavalry to be treated and judged fairly: "We, the Cavalry, are going to push the development of our mechanized cavalry to the limit of appropriations and ingenuity in order to find out its powers and limitations, and to fit it into its appropriate place in the team." A

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[185]Nenninger, 153.
[186]"The Fort Riley Maneuvers," *CJ* 43 (182 Mar.-Apr. 1934): 61,80; Maj. Gen. Leon B. Kromer, "Address of Maj. Gen. Leon B. Kromer, Chief of Cavalry, at Fort Riley, Kansas During the April-May Maneuvers," *CJ* 48 (183 May- Jun. 1934): 46; and "The Cavalry Maneuvers at Fort Riley, Kansas, 1934," *CJ* 43 (184 Jul.-Aug. 1934): 5-14.
[187]"The Fort Riley Maneuvers," 61,80.

realist, Kromer warned them not to expect too much of the new unit. He advised all cavalrymen to be tolerant and "have vision" as the arm explored its newest weapon.[188]

The exercise itself was divided into three phases. First came a series of demonstrations, intended to acquaint horse cavalrymen and the umpires who would control the exercise with the mechanized cavalry regiment and its capabilities. This phase began with a test of the new .50 caliber machine gun as an antitank weapon. The official report concluded that the ".50 caliber machine gun in position on the ground has a tremendous advantage over any gun in a moving vehicle." It confidently stated that tank armor could not be made impervious to the .50 caliber's bullet without an unacceptable penalty in weight and mobility. This finding helped foster the perception that horse cavalry could adapt to mechanized warfare. All it needed to neutralize tanks was the .50 caliber machine gun.

Experience in the Spanish Civil War would undermine confidence in the .50 caliber machine gun. The war caused many armies to increase the armor on their tanks. Therefore, the .50 caliber machine gun became a much less effective antitank weapon. This prompted calls for a more powerful replacement.[189] The greater problem became finding a way to add more powerful antitank weapons without sacrificing mobility. To Brig. Gen. Hamilton Hawkins, a leading proponent of the horse cavalry, "light wire-wheeled horse drawn carriages" offered a solution. He believed that any relative decline in cavalry mobility would be offset by the reduction in tank mobility that accompanied the thicker armor.[190] At least until 1937, horse cavalrymen believed they had a weapon that kept them competitive with the mechanized cavalry.

Subsequent demonstrations showed reconnaissance by an armored car platoon and attacks by the whole regiment and a combat car platoon supported by a machine gun

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[188]Kromer, "Address of Maj. Gen. Leon B. Kromer, Chief of Cavalry, at Fort Riley, Kansas During the April-May Maneuvers," 46 and Maj. Gen. Leon B. Kromer, Sub: "Notes of speech given to General Lott and officers at Fort Riley," TD, (1934), Box 3, Kromer Papers, 5-6.
[189]Brig. Gen. George P. Tyner, G-3, to Chief of Staff, Sub: "Tanks and Mechanized Units," TDS, 25 Oct. 1937, File AG 537.3, Box 2701, RG 407, 18.
[190]Brig. Gen. Hamilton S. Hawkins, "Imagination Gone Wild," *CJ* 47 (210 Nov.-Dec. 1938): 496-497.

platoon.[191] These displays gave the Cavalry School its first real taste of what the newest member of the cavalry family might be able to accomplish.

The two remaining parts of the exercise involved free maneuver in and around Fort Riley. Phase two pitted the mechanized cavalry regiment against the Cavalry School's two resident horse cavalry regiments.[192] As part of an ongoing test of proposed modifications to the organization of horse cavalry regiments, the Cavalry School "modernized" these two units. Each gained a platoon of ten scout cars and a machine gun troop armed with eight .50 caliber machine guns. Furthermore, trucks replaced the wagons in the regimental trains.[193] The mechanized cavalry regiment was not as fortunate. In a striking example of the impact of the budget on mechanization, only four of the mechanized cavalry regiment's twenty-four combat cars actually existed. To compensate for this deficiency, the mechanized cavalry had to use trucks to simulate the remaining combat cars.[194] These ersatz combat cars detracted from the regiment's cross-country mobility and created false impressions about the unit's capabilities and limitations. Trucks had neither the cross-country mobility nor the psychological impact of real combat cars. In the final phase of the exercise, the horse and mechanized regiments operated together against a notional enemy.

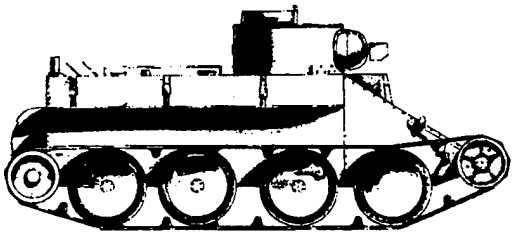

Figure 5.1 T-3 Combat Car. Four of these speedy experimental vehicles built be Walter Christie were the only real combat cars available to the 1st Cavalry (Mechanized) for the 1934 Fort Riley maneuvers. (from Macksey, *Tank*, 1971, p 70.)

191"The Cavalry Maneuvers at Fort Riley, Kansas, 1934," 5-6.
192"The Cavalry Maneuvers at Fort Riley, Kansas, 1934," TD, Box 3, Kromer Papers, 1.
193The Cavalry Maneuvers at Fort Riley, Kansas, 1934," *CJ*, 5.
194"The Cavalry Maneuvers, Fort Riley, Kansas, May 1934," Kromer Papers.

The 1934 Fort Riley maneuvers helped promote interest and confidence in a single cavalry arm combining both traditional and mechanized cavalry. Many cavalrymen found this idea attractive. It allowed for the incremental change these officers needed to reconcile modernity with the horse. During the exercise, the mechanized cavalry regiment's superior mobility allowed it to win most engagements. However, the horse cavalry exposed the mechanized unit's vulnerability to night attacks and denied them bridges and stream crossings. The lessons drawn from the exercise reflected the expectations the participants brought with them. Chaffee believed that the mechanized cavalry had demonstrated its superiority.[195] For his part, Grow believed the maneuvers caused some cavalryman to recognize, for the first time, the potential of mechanized cavalry.[196] Not only had the test validated the idea of mechanized cavalry, it had also convinced many that properly-led "modernized" horse cavalry could hold its weight against a mechanized foe. The official report stated the maneuvers demonstrated the need for both mechanized and horse cavalry. It found: "The combination of horsed and mechanized cavalry as we see it developing today gives us that versatility insuring continuity of action night and day and the greatest possible application of force where and when needed."[197]

Reports of successful cooperation between the two in other maneuvers also lent credence to the horse-mechanized idea. An infantry officer described to readers of the *Cavalry Journal* his surprise to discover in a recent exercise that horse cavalry was the optimal unit for supporting a tank attack. The author claimed this was "the first time my tank unit was ever closely supported." The horse cavalry reached the objective with the tanks — the infantry he normally operated with apparently rarely did — and arrived prepared to continue the attack. The editor of the *Cavalry Journal* noted that "volumes could be written around that remark."[198]

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[195]Gillie, 67-68.
[196]Grow, "The Ten Lean Years," 50.
[197]"The Cavalry Maneuvers at Fort Riley, Kansas, 1934," Kromer Papers, 20.
[198]"Tank Support," *CJ* 46 (203 Sep.-Oct. 1937): 466.

A visit by the students and faculty of the Cavalry School to Fort Knox provided the editor of the *Cavalry Journal* with the opportunity to repeat his plea for cooperation. "To many, mechanization had been an unknown monster," he wrote, but now "no cavalryman is complete in his education if he is merely a horse cavalryman or merely a mechanized cavalryman. He must be both."[199] Foreign authors offered their support as well. A British officer argued that mechanization complemented instead of competing with the horse. "Somewhere there is a balance without rushing to extremes." he wrote, concluding that "it is the balance we want to strike."[200]

Figure 5.2 *The Cavalry Journal* Sends a Message. The horseman, machine gun, combat car, and scout car are all equal parts of the cavalry by 1939. Note that the horseman appears to be riding into the distance while the scout and combat car are clearly moving toward the viewer. (from *The Cavalry Journal* Vol. 48 No. 1 Jan.-Feb. 1939, p. 87.)

Van Voorhis considered combined cavalry operations a necessary evil and the pet project of the Office of the Chief of Cavalry.[201] Indeed after 1930, the chiefs did everything in their powers to promote the mixture of horse and mechanized cavalry. Kromer ordered that it be emphasized in all doctrine and official correspondence. For a time in 1938, he even demanded that Hawkins tow this line.[202] *The Cavalry Journal*'s illustrations eventually also fell into line, adding new images that captured the spirit of cooperation and accommodation.

199"The Cavalry School Visits Fort Knox," *CJ* 46 (202 Jul.-Aug. 1937): 340.
200Maj. J.R.J. Macnamara, "The Horse in War," *CJ* 47 (210 Nov.-Dec. 1938): 501.
201Brig. Gen. Daniel Van Voorhis to Lieut. Col. Willis D. Crittenberger, 1 Sep. 1938, TL, Box Correspondence 1935-1938, Crittenberger Papers.
202Lieut. Col. Willis D. Crittenberger to Brig. Gen. Daniel Van Voorhis, 10 Sep. 1938, TL, Box Correspondence 1935-1938, Crittenberger Papers.

Some of the stated justifications for horse-mechanized cooperation strained credulity. For example, Capt. Hayden Sears — an otherwise bright officer — argued publicly that mechanized and horse cavalry needed each other because mechanized cavalry neutralized horse units' weaknesses when confronting wire and entrenchments while the mechanized troopers needed horsemen to handle antitank guns and landmines![203]

Figure 5.3 *The Cavalry Journal* Repeats the Message This time the airplane joined the Cavalry's new team. (from *The Cavalry Journal* Vol. 48 No. 3 Mar.-Apr. 1939, p. 251.)

Propaganda and genuine convictions combined to build a progressive consensus for combined cavalry. By April 1935, Col. C.F. Martin observed "there seems to be a growing comprehension that mechanization is really a new form of cavalry, that mechanized cavalry and horse cavalry are supplementary."[204] Just a few year later, in 1938, Crittenberger described many officers in Washington confidently asserting that mechanized cavalry needed horse cavalry to operate effectively.[205]

As Chief of Cavalry, Kromer actively promoted such ideas. In doing so, he attempted to balance the ironhorsemen and the horsey set and advance the greater good of

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[203]Capt. Hayden A. Sears, "Mobility - Firepower and Shock," *CJ* 48 (214 Jul.-Aug. 1939): 287.
[204]Col. C.F. Martin, "Influence of Mechanization, Motorization and Machine Guns on the Horse Cavalry Regiment's Tactics, Organization and Supply Methods," *CJ* 44 (188 Mar.-Apr. 1935): 6.
[205]Crittenberger to Van Voorhis, 10 Sep. 1938.

the arm. Like Henry, Kromer would be only moderately successful. Though a superior performer at West Point, hiss background was not unlike his predecessor.[206] He had been the Assistant Commandant of the Army War College just before being assigned as Chief of Cavalry. In that capacity, Kromer participated in the schoolhouse debates that accompanied conferences and presentations on mechanization. After one, he described the weight of responsibility that rested on the decision-makers shoulders as the biggest obstacle to change in the Army. Kromer used the analogy of investing one's life savings to describe what he saw as the Army's natural preference of a conservative approach to mechanization.[207] Kromer would be true to his word while Chief of Cavalry.

From the outset, Kromer acknowledged that he had much to learn about the mechanized cavalry."[208] He wrote Van Voorhis that he was receptive to the idea of having an expert on mechanization resident in the Office of the Chief of Cavalry.[209] Kromer made arrangements to have Patton present with him at the 1934 Fort Riley maneuvers so that he might have the benefit of his experience.[210] Later, he would insist that Van Voorhis stay in close touch with him on matters relating to mechanization.[211] Van Voorhis complied and the pair worked together to advance the mechanized cavalry's interests in the War Department. With his remarks at the 1934 maneuvers, Kromer made his support of a single harmonious cavalry unequivocal. He followed them up with deeds, working together with Van Voorhis to secure changes in the organization of the mechanized cavalry regiment that significantly increased its combat power. When these changes ignited a battle over the roles and mission of cavalry, Kromer led its defense. He insisted the arm not be robbed of its role in offensive operations.

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[206]Cullum, *Biographical Register.*
[207]Maj. Oswald H. Saunders, "Status of Mechanization - 1933," Address to Lecture delivered at the Army War College, Washington, D.C., 18 Sep. 1933, TD, File AWC 403A-5, AWC Curricular Files, 21-22.
[208]Maj. Gen. Leon B. Kromer, to Brig. Gen. J.R. Lindsey, TL, 9 Apr. 1934, Box 2, Kromer Papers.
[209]Col. Daniel Van Voorhis, to Maj. Gen. Leon B. Kromer, TL, 27 Mar. 1934, Box 2, Kromer Papers and Maj. Gen. Leon B. Kromer, to Col. Daniel Van Voorhis, TL, 9 Apr. 1934, Box 2, Kromer Papers.
[210]Maj. Gen. Leon B. Kromer, to Mrs. Samuel D. Rockenbach, TL, 20 Apr. 1934, Box 2, Kromer Papers.
[211]Maj. Gen. Leon B. Kromer, to Brig. Gen. Daniel Van Voorhis, TL, 16 Mar. 1937, Box Correspondence 1935-38, Crittenberger Papers.

His subordinate, Robert Grow, believed that Kromer became a complete convert to the cause of mechanization. Still, Kromer met resistance from the General Staff and unnamed senior cavalry officers. Grow believed Kromer "sincerely felt that Cavalry would never fully accept and really support mechanization" and it would eventually form a separate arm. Kromer feared the future of cavalry was bleak and Grow described him trying "desperately to rally support for mechanization even at the expense of the horse cavalry."[212]

At the same time, Kromer also felt pressure to look after the horse cavalry. Maj. Gen. Malin Craig, a friend since West Point and himself a former Chief of Cavalry, congratulated Kromer on his selection. Craig, who would be made Chief of staff the following year, also advised him:

> You have a hard task ahead of you.... I hope you realize the necessity for bringing back, in some way, the old esprit and love of its arm which has made our Cavalry in the past what it was.... Something tells me that the belief in its arm is not the predominating characteristic of the modern Cavalry officer.

Craig recommended that Kromer bring Hamilton Hawkins back to run the Cavalry School "for he breathes and dreams Cavalry."[213]

Kromer's public stance on mechanization further indicated his commitment to a single modern cavalry. In address before the Army War College in 1937, he summarized the general trends in cavalry around the world. Kromer noted how the Germans were forming a panzer corps for a strategic cavalry raids. He cited French experiments with units combining horse and mechanized cavalry in the same organization. Yet Kromer insisted that the geopolitical differences between the United States and Europe demanded a uniquely American approach to modernizing cavalry. He claimed to have optimized horse and mechanized units to meet the nation's special needs. Kromer observed that the unavailability of modern equipment limited progress in mechanization. "Cavalry welcomes any mechanized development that will increase its effectiveness," he stated, adding "if, in

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[212]Grow, "The Ten Lean Years," 70,71, 74.
[213]Maj. Gen. Malin Craig, to Maj. Gen. Leon B. Kromer, TL, 13 Mar. 1934, Box 2, Kromer Papers.

the future, we develop any breed... of the ironhorse that can prove superior to the thoroughbred for all cavalry missions, we will abandon the horse."[214] Grow, a student in the audience, described this talk as "by far the best we ever had."[215]

That same year Kromer also testified before Congress on the special advantages of having both horse cavalry and mechanized cavalry. He believed it afforded

> Versatility in insuring continuity of action, day and night, and the greatest application of forces when and where needed, and ability to use that form of powerful mobile fighting troops which is best adapted for the particular terrain in which the operation occurs.[216]

Kromer's conviction that the single cavalry model offered the best hope for the arm manifested itself in personnel policy as well. To be assigned to the mechanized cavalry, a lieutenant first must have served with horse cavalry and completed the Advanced Equitation Course at the Cavalry School.[217] While this policy prevented the mechanized cavalry from getting the numbers of junior officers it wanted, it also ensured those who arrived were grounded in the basic skills of their profession.

Kromer played an important role in adjusting the organizational scheme of the mechanized cavalry regiment after the 1934 Fort Riley maneuvers. This exercise suggested to many cavalrymen that the mechanized cavalry regiment needed additional combat power and flexibility. The combat car squadron required additional combat cars to increase its offensive more punch and make it more robust. The machine gun troop demanded additional firepower to effectively hold ground. The self-propelled guns failed to neutralize antitank defenses as planned. Likewise, cavalry officers were disappointed by the scout troop's utility. After soliciting advice from Fort Knox, Kromer submitted to the War Department revised tables of organization for the regiment. (See Figure 5.4) The major

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[214]Maj. Gen. Leon B. Kromer, "Cavalry," Address to Army War College, Washington, D.C., TD, Box 2, Kromer Papers,1-2, 5. Emphasis ion the original.
[215]Grow, "The Ten Lean Years" 1.
[216]"Necessity for Horsed Cavalry Under Modern Conditions: Extract from Recent Hearings Before the Subcommittee of the Committee on Appropriations, House of Representatives on the War Department Appropriations Bill, 1938," *CJ* 46 (201 May-Jun. 1937): 6.
[217]Grow, "The Ten Lean Years" 68. and Maj. Gen. Leon B. Kromer, to Brig. Gen. Daniel Van Voorhis, TL, 16 Mar. 1937, Box Correspondence 1935-38, Crittenberger Papers, 3.

features of this plan were an increase in the regiment's combat car strength from thirty-six to fifty-six, the elimination of the scout troop, and the replacement of the self-propelled guns with a mortar platoon. The additional combat cars provided more offensive punch, while the mortars allowed the regiment to blind the enemy's antitank defenses with smoke.[218]

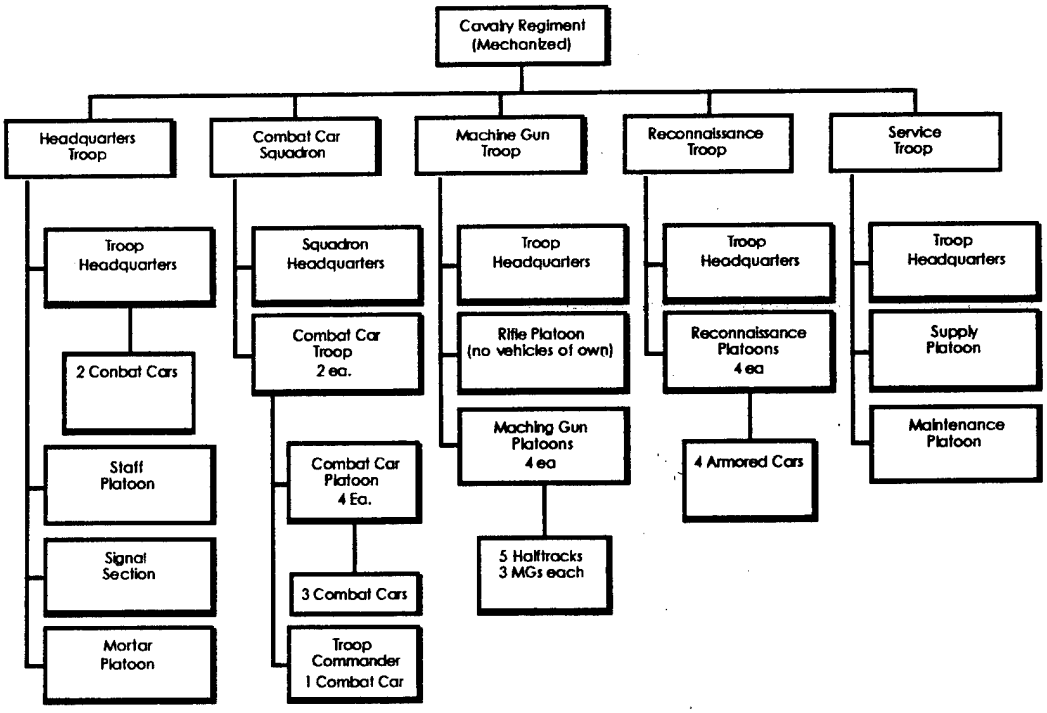

Figure 5.4 Mechanized Cavalry Regiment, 1935. Note that the reorganization had altered the combat car units, eliminated the redundant scout car troop, and added a mortar platoon.

The plan ignited a battle between Kromer and opponents of the mechanized cavalry within the G-3. The dispute centered on the roles and missions of the unit. The problem lay in differing conceptions of just what the mechanized cavalry was supposed to do on the

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[218]Maj. Gen. Leon B. Kromer, to Adjutant General, Sub: "Modification of Procurement Program for the 1st Cavalry (Mecz.)," TDS, 4 Apr. 1935, File AG 537.3 Mechanized Force (continued), Box 2704, RG 407. The inclusion of the mortar platoon caused a three way fight between the Chemical Warfare Service, the Field Artillery and the Cavalry over its control. It was also greatly valued by mechanized cavalry. Palmer considered its fires the only way to neutralize antitank defenses that would otherwise drive mechanized units from the battlefield. See Brig. Gen. John H. Hughes, to Chief of Staff, Sub: "Organization, equipment, and funds for the 1st Cavalry, Mechanized - DRAFT," TD, File 322.02 Cavalry Regiment (Mecz.), Box 6, RG 177, 1 and Col. Bruce Palmer, "Address of Col. Bruce Palmer, First Cavalry (Mecz.)," Address to Lecture delivered at the Army War College, Washington, D.C., 17 Oct. 1936, TD, File Lectures and Notes on Motorization and Mechanization, Box 1 Maneuvers 1938-1939, RG 177, Records of the Mechanized Cavalry Board, 5-6.

battlefield. MacArthur's directive assigned it missions that required both offensive and reconnaissance abilities. Cavalrymen had aggressively pursued the offensive tasks, knowing that it was in this area that the mechanized cavalry could make the strongest contribution. Infantrymen, including Brig. Gen. John H. Hughes, Chief of the Operations Section of the General Staff, feared the cavalry was encroaching on their prerogatives. They believed the proposed changes would transform the mechanized cavalry regiment into a general purpose unit like the old mechanized force and rob the infantry of its share of any new tank production. Hughes accused Kromer of allowing the mechanized cavalry to stray from its charter by moving toward the creation of a "heavy self-contained mechanized striking force."[219] Kromer defended the proposed changes. He argued that the mechanized regiment was an experimental unit, the organization of which had been decided without the benefit of experience. The Fort Riley maneuvers had revealed deficiencies that he now simply was trying to correct. Kromer insisted that the mechanized cavalry needed to fight to accomplish its missions and, thus, should be as powerful as possible. The Deputy Chief of Staff agreed with Kromer and authorized the changes he had sought.[220]

The new organization was first tested in the 1936 Second Army Maneuvers. These exercises were also the mechanized cavalry regiment's first opportunity to take the field with all the Army's other arms. The first phase occurred at Fort Knox that August when two National Guard infantry divisions battled the regiment reinforced with artillery and motorized infantry. The regiment's new commander, Col. Bruce Palmer, found the motorized infantry very useful. It occupied blocking positions across the National Guard's axis of advance, fixing them while the mechanized cavalry struck their flanks and rear. Later the same month, the site shifted north to Allegan, Michigan. After marching 400 miles in two days, the mechanized cavalry faced two different National Guard divisions on

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[219]Brig. Gen. John H. Hughes, to Chief of Staff, Sub: "Organization, Equipment, and Funds for the 1st Cavalry (Mecz.)," TDS, 17 Apr. 1935, File 322.02 Cavalry Regiment (Mecz.), Box 6, RG 177.
[220]Maj. Gen. Leon B. Kromer, to Adjutant General, Sub: "Modification of Procurement Program for the 1st Cavalry (Mecz.)," TDS, 4 Apr. 1935, File AG 537.3 Mechanized Force (continued), Box 2704, RG 407 and Johnson, 326-327.

terrain that favored the infantry.[221] For this portion of the maneuvers, the mechanized cavalry regiment received the support of additional infantry, artillery, and a National Guard horse cavalry regiment.

Palmer summarized the lessons of the Second Army maneuver for the *Cavalry Journal.* The exercise brought out the need for additional supporting troops, especially riflemen, in the mechanized regiment. In close terrain and at night, it lacked the dismounted strength needed to secure its positions against infantry attacks. Otherwise, Palmer deemed the new organization to be a success. The results of the horse-mechanized operations in the Michigan phase were more ambiguous. Although he declared these efforts successful, Palmer indicated that problems within that particular horse unit limited its ability to participate adequately.[222]

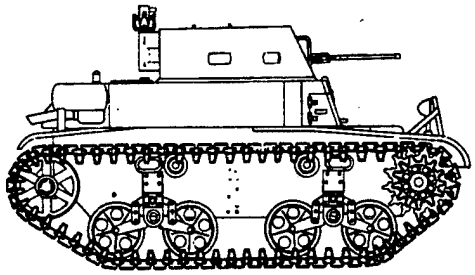

Figure 5.5 M-1 Combat Car, 1936 These vehicles were the first new production armored vehicles the mechanized cavalry received in any number. They weighed just under ten tons, had a four man crew, and was armed with three machine guns. (From Macksey, *Tank*, 1971, p 97.)

Among the progressives, Col. Bruce Palmer ranked highly. Students at the Cavalry School, where he was Assistant Commandant in the early 1930s, recognized Palmer for his horsemanship and his commitment to modernizing the arm through mechanization and improvements to horse units.[223] He took command of the 1st Cavalry Regiment (Mechanized) after the 1934 Fort Riley maneuvers, but remained a strong

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[221]Col. Bruce Palmer, "Mechanized Cavalry in the Second Army Maneuvers," *CJ* 45 (198 Nov.-Dec. 1936): 461, 463-469.
[222]Ibid., 474-477.
[223]Truscott, 95-96.

supporter of the horse cavalry. After the *Cavalry Journal* ran an article on a 150-mile horse endurance ride by a cavalry lieutenant in Texas, Palmer and Col. Charles Scott, commander of the other mechanized cavalry regiment then being formed, joined forces to praise the effort. They described themselves as "strong believers in the horse," adding that "it is this sort of thing that will do more than anything else to preserve the horse cavalry, and it must be preserved." Palmer and Scott believed such efforts helped convince skeptics that refinements in the techniques of horse cavalry could enhance its mobility and utility. They concluded with a call for more horse cavalry, decreeing it absolutely essential to the arm's ability to furnish mobile combat power on any terrain.[224] This public statement by two leading mechanized cavalry officer's was a powerful endorsement of the progressive viewpoint.

Scott provides an example of the officers whose association with the mechanized cavalry moved them into the ranks of the reformers. A founder of the American Remount Association, he returned to the cavalry in 1930 after a decade of service in the Quartermaster Corps. Scott went straight to the Cavalry School, where he served as the Assistant Director then Director of Instruction. By all accounts, Scott was an opinionated and vocal advocate of modernizing the horse cavalry and tapping the potential of mechanization.[225] As commander of a mechanized regiment, Scott admitted he gained increased confidence in this new cavalry unit during his association with it. Its tactical agility and the offensive power of its combat cars particularly impressed Scott. He added, "we've barely scratched the surface in this work; the day and the year are entirely too short to do all the things we could and would like to do."[226]

Frustration with dilettantes who meddled in the mechanized cavalry's affairs drove Scott farther and farther into the arms of the reformers. In 1938 he told Crittenberger that a

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[224]"Commanders of Mechanized Regiments Comment on Endurance Ride," *CJ* 46 (201 May-Jun. 1937): 213.
[225]Cullum, *Biographical Register* and Truscott, 96.
[226]Col. C.L. Scott, to Col. Guy V. Chapman, Naval War College., TL, 17 Mar. 1938, File Correspondence, Jan.-May. 1938, Box Correspondence, 1935-1938, Crittenberger Papers, 6.

recent *Cavalry Journal* article on scout cars was "the most inane, asinine proposal that has ever been submitted: I am ashamed that the Cavalry Journal would even print it." He continued with a flair that perhaps only Patton's letters exceed:

> Thank God my annual physical examination shows my blood pressure exceptionally good, if it were not I would sure as hell fall dead some day after reading some of the "bullshit' that's being scattered around nowadays on subjects by authors who are doing muddy thinking on a subject about which they know nothing.[227]

He later confessed to Crittenberger that he was "getting damned well fed up on those bright boys that can sit in a chair in Washington and figure things out on paper better than anyone can do it here by practical work."[228]

While the promise of mechanization appealed to the progressives, they and the Army's senior leadership were conservative enough to demand tangible proof. As Scott wrote in 1935:

> In peacetime we *must progress*, go backward or else dry rot. Our cavalry, of course, must adopt new means and new methods, *but only after we have subjected such changes to the acid test* and have made sure that we have not discarded the experience of centuries in equipment to put of faith in a new "gadget."[229]

Like their more conservative brethren, these progressive officers found it difficult to think of the cavalry without horses. In the absence of funds and materials for large scale tactical tests of mechanization these officers only could be won over with time.

227227Col. C.L. Scott to Lieut. Col. Willis D. Crittenberger, TL, 9 Sep. 1938, Box Correspondence, 1935-1938, Crittenberger Papers.

228Col. C.L. Scott to Lieut. Col. Willis D. Crittenberger, TL, 20 Feb. 1939, File Correspondence, Jan.-Jun. 1939, Box Correspondence, 1939-1941, Crittenberger Papers.

229Col. Charles L. Scott, "Are More Changes Needed in Our Horsed Cavalry Regiments Now?," *CJ* 44 (191 Sep.-Oct. 1935): 42. Emphasis in the original.

CHAPTER 6.

THE EXPANSION OF THE MECHANIZED CAVALRY

As the cavalry arm weighed the lessons of the 1934-36 maneuvers, the War Department was already taking steps to expand the mechanized cavalry. From the beginning, the General Staff had intended to mechanize a second horse regiment and a brigade headquarters if the first mechanized regiment proved successful. The plan for the brigade called for two mechanized cavalry regiments, an artillery battalion, a squadron of airplanes, and supporting units. (See Figure 6.1) Technically, the War Department formed the 7th Cavalry Brigade (Mechanized) in January 1932. For three years it existed largely on paper. The brigade had a headquarters and a set of tables of organization, but little else. The cavalry generals who commanded the unit spent most of their time supervising the expansion of Fort Knox, the Civilian Conservation Corps, and Reserve Officer's Training Corps activities there.[230]

Shortly after the 1934 Fort Riley maneuvers, Kromer began pursuing the formation of the brigade's second mechanized cavalry regiment. Once again, the Chief of Cavalry's plan ran afoul of the politicians. His plans to move the 4th Cavalry from Fort Meade, South Dakota, to Fort Knox raised problems similar to those associated with the earlier relocation of the 1st Cavalry. This time, state political interest won out. Faced with the

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[230]The 13th Cavalry was one of the two regiments at the Cavalry School. Part of the delay in forming the second mechanized cavalry regiment stemmed from Kromer's desire to have a mechanized cavalry regiment at Fort Riley. Failing in that effort, he allowed the 13th Cavalry to be transferred to Fort Knox and mechanized. Col. C.L. Scott, Sub: "Mechanization of a Second Regiment of Cavalry," TD, 4 May 1936, File 322.02 13th Cavalry, Box 7, RG 177; Col. C.L. Scott, to Maj. Gen. Leon B. Kromer, Sub: "Data on the mechanization of a second Regiment of Cavalry," TD, 8 May 1936, File 322.02 13th Cavalry, Box 7, RG 177.; Brig. Gen. Guy V. Henry, Jr., to Chief of Cavalry, Sub: "Completion of the organization of the 7th Cavalry Brigade (Mecz.) by mechanizing one horse regiment at Fort Riley, Kansas," TDS, 9 May 1936, File 322.02 13th Cavalry, Box 7, RG 177; and Maj. Gen. Leon B. Kromer, to G3, Sub: "Second Mechanized Regiment of the 7th Cavalry Brigade (Mechanized)," TD, 13 May 1936, File 322.02 13th Cavalry, Box 7, RG 177.

choice of either converting the unit and leaving it in South Dakota or finding an alternative unit to move to Fort Knox, Kromer chose the latter.[231] Splitting the brigade between South Dakota and Kentucky would undermine its ability to train as a unit. After a long period of discussion, proposals, and counter-proposals, the War Department transferred the 13th Cavalry from Fort Riley to Fort Knox in the summer of 1936.[232]

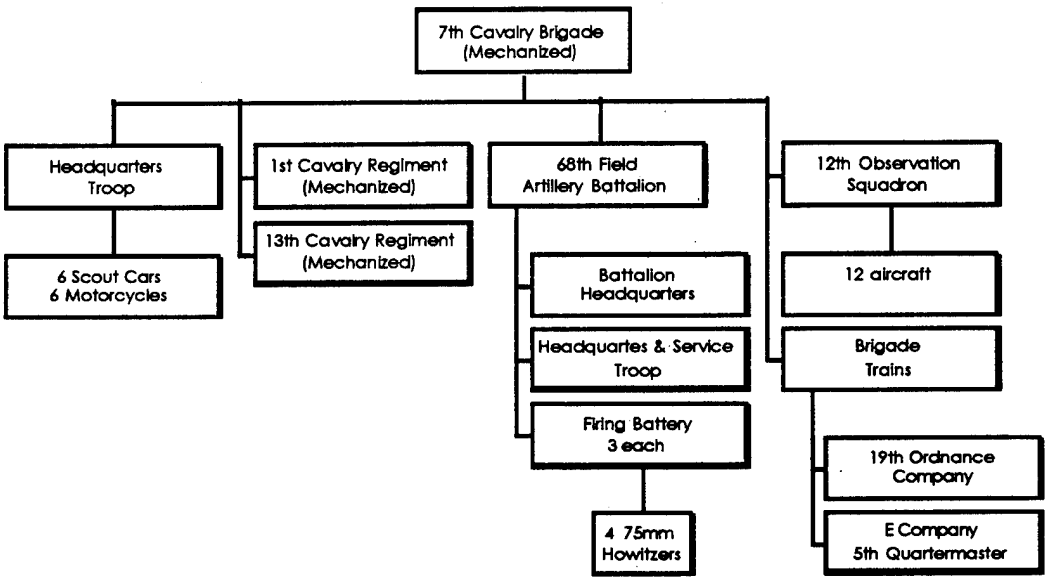

Figure 6.1 7th Cavalry Brigade (Mechanized),1939. The original plan for the brigade was identical.

The mechanization of the 13th Cavalry completed the mechanized cavalry brigade and ended the first phase of cavalry mechanization. At the cost of two horse regiments, the arm had secured a share of a growing Army program and gained a powerful new organization. The mechanized cavalry had the ability to restore the arm's ability to

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231Johnson, 328-329.

232The 13th Cavalry was one of the two regiments at the Cavalry School. Part of the delay in forming the second mechanized cavalry regiment stemmed from Kromer's desire to have a mechanized cavalry regiment at Fort Riley. Failing in that effort, he allowed the 13th Cavalry to be transferred to Fort Knox and mechanized. Col. C.L. Scott, Sub: "Mechanization of a Second Regiment of Cavalry," TD, 4 May 1936, File 322.02 13th Cavalry, Box 7, RG 177; Col. C.L. Scott, to Maj. Gen. Leon B. Kromer, Sub: "Data on the mechanization of a second Regiment of Cavalry," TD, 8 May 1936, File 322.02 13th Cavalry, Box 7, RG 177.; Brig. Gen. Guy V. Henry, Jr., to Chief of Cavalry, Sub: "Completion of the organization of the 7th Cavalry Brigade (Mecz.) by mechanizing one horse regiment at Fort Riley, Kansas," TDS, 9 May 1936, File 322.02 13th Cavalry, Box 7, RG 177; and Maj. Gen. Leon B. Kromer, to G3, Sub: "Second Mechanized Regiment of the 7th Cavalry Brigade (Mechanized)," TD, 13 May 1936, File 322.02 13th Cavalry, Box 7, RG 177.

participate in the main battle. Yet every exercise brought the question of the arm's essential character into sharper focus. The reformers believed the mechanized cavalry was demonstrating its ability to outperform the horse cavalry. The conservatives grudgingly admitted some successes, but harped upon the mechanized cavalry's failures and limitations. Others, notably Kromer and Henry, saw the future in a single cavalry that combined horse and mechanized units. Many simply withheld their judgment pending further proof of the potential of mechanized cavalry.

Like his subordinates, each Chief of Cavalry had his personal views on the subject of mechanization. Yet when they assumed the mantel of office, the chiefs subordinated their own opinions to what they believed was the best for the arm. Rightly or wrongly, they became more concerned with preserving the institution of cavalry than with advancing its military effectiveness. On the issue of mechanization, the chiefs labored to keep the arm from fracturing into a decaying horse arm and a rising mechanized one. This effort required the chiefs to beat the drum for the idea of a single cavalry, one that both that fought on horseback and provided modern mobile combat power. This was a difficult course to chart on what amounted to an ideological issue. First Henry, then Kromer, managed some success in the effort. By appealing to the progressive middleground, they moved the cavalry forward in increments.

With the completion of the mechanized cavalry brigade, the focus of the reformers attention shifted to creating a mechanized cavalry division. They saw such a unit as the natural successor to the horse cavalry division. It would inherit the latter's role as a field army commander's source of concentrated mobile combat power for strategic operations. Debate over the creation of this unit and the concomitant expansion of the mechanized cavalry simmered for years before coming to a boil in late 1939. Where would the manpower necessary for the expansion come from? Kromer was willing to sacrifice an additional horse regiment to create such an organization.

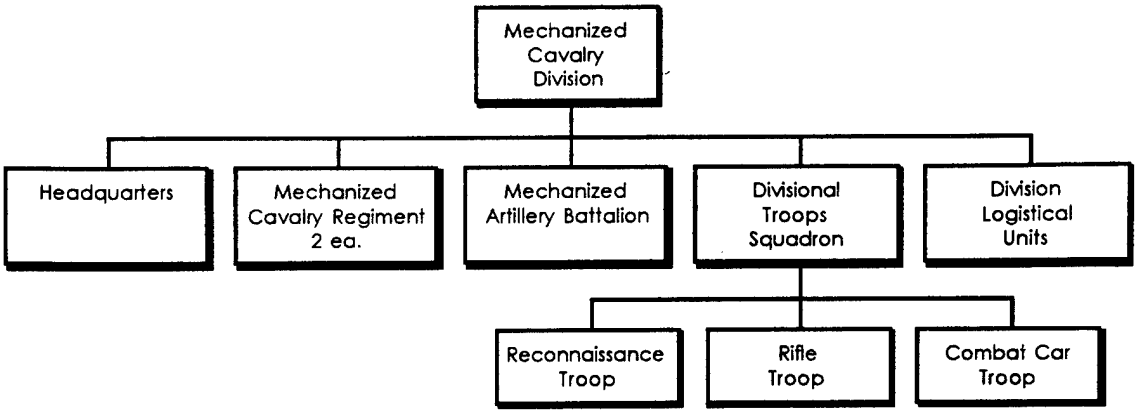

Figure 6.2 Van Voorhis' Proposed Mechanized Cavalry Division, 1937. Note that it added a small divisional troops squadron to the existing mechanized cavalry brigade organization.

By late 1936, officers in the Office of the Chief of Cavalry and at Fort Knox had begun to consider the creation of a mechanized cavalry division. Van Voorhis, in response to Kromer's request for his view, asserted that mechanization was the trend of the future. The cavalry would do well to profit from it. He suggested enlarging the mechanized cavalry brigade to a division. Van Voorhis' plan eliminated the brigade echelon entirely and replaced it with a division headquarters and additional logistics units. (See Figure 6.2) The division included an independent squadron of combat troops under the division commander's direct control. The squadron gave him a small combat car reserve, a reconnaissance troop, and a rifle troop all for use at the division commander's discretion. Under the existing table of organization, the commander of the mechanized cavalry brigade had to split up a mechanized cavalry regiment to obtain any of these assets.[233] Kromer incorporated Van Voorhis' ideas into a plan he sent to the General Staff in July 1937.[234]

Kromer's proposal coincided with a reappraisal of Army mechanization policy at the highest levels. A month before, Chief of Staff Gen. Malin Craig expressed his dissatisfaction with the cavalry's slow progress toward completion of the mechanized

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[233]Johnson, 330-331.
[234]Maj. Gen. John K. Herr, to G-3, Sub: "Organization of Armored Force," TD, 7 Dec. 1940, File 322.02 Armored Corps, Box 8, RG 177.

cavalry brigade. The lack of coordination between the infantry and cavalry on mechanized doctrine and development particularly bothered him.[235] Although MacArthur's mechanization policy had delineated separate missions for infantry and cavalry mechanized units, the organizations that resulted seemed to have overlapping capabilities. In response to Craig's concerns, Brig. Gen. George P. Tyner, the Chief of the Operations Section of the General Staff, issued a staff study on the issue that October. He accepted blame for the current confusion in mechanized doctrine, acknowledging that his section had not coordinated as it should. Just as previous studies had done, Tyner's report discussed and rejected the creation of a separate arm to pursue mechanization. The report listed a variety of practical problems with such a plan. Tyner believed that the hearings necessary to secure legislation authorizing the new arm would expose divisiveness within the Army.[236]

Instead, the Chief of the Operations Section called for the expansion of the cavalry arm's mechanization program. He proposed the formation of a separate mechanized cavalry squadron at the Cavalry School and a mechanized cavalry division of three regiments.[237] The separate squadron would aid in mechanized cavalry instruction at the Cavalry School. The three-regiment division provided the combat cars Tyner believed the unit needed "to give adequate front and depth" to its offensive operations.[238]

Van Voorhis, now a major general commanding the Fifth Corps Area, and Chaffee, the mechanized cavalry brigade's new commander, feared the third regiment would make the division unwieldy. They preferred to increase the number of combat cars in each of the existing regiments. Kromer waffled. He suggested the squadron at Fort Riley might be expanded into the division's third regiment, but he also repeated his support for the two-

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[235]Gen. Malin Craig, to Deputy Chief of Staff, Sub: "Mechanized Forces," TDS, 28 Jun. 1937, File AG 537.3, Box 2701, RG 407.
[236]Brig. Gen. George P. Tyner, to Chief of Staff, Sub: "Tanks and Mechanized Units," TDS, 25 Oct. 1937, File AG 537.3, Box 2701, RG 407, and Lieut. Col. Willis D. Crittenberger, to Lieut. Col. Raymond E. McQuillin, TL, 30 Jan. 1939, Box Correspondence 1939-41, Crittenberger Papers.
[237]Ibid.,
[238]Col. G.W. Cocheu, Acting G-3, to Chief of Staff, Sub: "Covering memorandum for G-3/21500, October 25, 1937, subject: 'Tanks and Mechanized Units.'," TDS, 13 Dec. 1937, File AG537.3, Box 2701, RG 407, 3-4.

regiment plan.[239] In April 1938, Craig directed the cavalry to prepare plans for a three-regiment division.[240] The reasons for his decision are unclear.

A concurrent proposal by Lieut. Col. Guy V. Chapman, a cavalry officer attending the National War College, reopened old wounds and again raised the question of whether the cavalry had a role in the main battle. Chapman circulated within the Army leadership a plan to limit mechanized cavalry strictly to reconnaissance and security missions. His proposal recalled the issues raised by the opponents of the mechanized cavalry during the modification of the regiment in 1935. Very upset by Chapman's message and methods, Kromer fired off a harsh letter to him. The Chief insisted reconnaissance and security were secondary to cavalry's role in offensive combat. Moreover, he questioned Chapman's propriety in distributing his proposal without giving the Chief of Cavalry an opportunity to comment on it first.[241]

The idea of forming a future multipurpose mechanized unit along the lines of the German panzer division came up in debate about mechanized cavalry division. Lieut. Col. Willis D. Crittenberger, the operations officer of the 7th Cavalry Brigade (Mechanized) at the time, did not care for this idea. Like other cavalrymen, Crittenberger considered the needs of this type of unit antithetical to those of a cavalry organization. To attack strong defenses, a multipurpose unit required heavier armored vehicles. These slow vehicles were unsuitable for cavalry missions. Rather than mimicking foreign trends, Crittenberger believed the U.S. Army should pursue its own program. He advised a friend: "We are developing, here at Fort Knox a tactical employment of mechanized cavalry that is peculiarly American in its characteristics and entirely different from the thoughts on the subject abroad."[242] Experience convinced Crittenberger that the cavalry's future lay in

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[239]Ibid.; Gillie, 109-110; and Maj. Gen. Leon B. Kromer, to G-3, Sub: "G-3 Study, Tanks and Mechanized Units, October 25th 1937 Attached," TDS, 29 Nov. 1937, File AG 537.3, Box 2701, RG 407.
[240]Lieut. Col. Willis D. Crittenberger, to Lieut. Col. Raymond E. McQuillin, TL, 30 Jan. 1939, Box Correspondence 1939-41, Crittenberger Papers.
[241]Maj. Gen. Leon B. Kromer, to Lieut. Col. Guy W. Chapman, TL, 16 Mar. 1938, Box Correspondence 1935-1938, Crittenberger Papers.
[242]Lieut. Col. Willis D. Crittenberger, to Col. Raymond E. McQuillin, TL, 24 Feb., Box Correspondence 1939-41, Crittenberger Papers, 2-3.

mechanization. Based upon his first-hand knowledge and reports of European military developments, he expected mechanization to figure prominently in the next war.[243]

Meanwhile, the reactionaries continued to rail against the expansion of mechanization. Col. H.S. Stewart, an Indian Army officer, argued to an American audience that mechanized cavalry could never be successful because its officers and men could not possibly be imbued with "the cavalry spirit." Such spirit came only from sharing life and danger "with the noblest animal in the world." He wrote:

> The cavalry spirit came naturally to men living in an atmosphere of horses. It is not the substitution of the dungaree overalls, spanners and oil cans for breeches, swords and spurs that will decrease the cavalry spirit, but disassociation from horses.[244]

Stewart insisted that because the best cavalry officers enjoyed equestrian sports, they could never be lured into a mechanized unit. Even if a new mechanized cavalry unit were to start off with such men, the author insisted that the true horsemen would not stay. Stewart entertained special concerns about the type of enlisted soldiers the mechanized cavalry would attract. Men "whose minds revel in problems of engineering and electricity, are seldom interested in tactics," he reasoned. Stewart also feared that wartime levees would bring men with "Trade Union ideas" into the cavalry. These ideas, he argued, "may be excellent in their sphere, but they are antagonistic to *morale* and discipline." Stewart rationalized that working class conscripts were acceptable to the other arms but unfit for service in the cavalry![245]

A few years later, Stewart revisited his argument against mechanization. He observed that inferior generals always underestimated horse cavalry. While he believed mechanization and motorization did not have to occur at the expense of the horse, Stewart admitted the cavalry was "an expensive arm; and its abolition does provide money for

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[243]Lieut. Col. Willis D. Crittenberger, to Col. Raymond E. McQuillin, TL, 31 Dec. 1936, Box Correspondence 1935-38, Crittenberger Papers, 2.
[244]Col. H.S. Stewart (Indian Army), "Mechanized Cavalry Has Come to Stay," *CJ* 47 (216 Nov.-Dec. 1938): 486.
[245]Ibid., 487,490. Emphasis in the original.

mechanization and motorization that otherwise might not be available." In a classic argument against material progress, however, he maintained the cavalry spirit was incompatible with "discipline, training, science, mechanics or any other kindred interests; it flourishes naturally among men whose philosophy of life causes them to find enjoyment in risking their lives in field sports connected with horses."[246]

Stewart's insistence that mechanization and the cavalry spirit were mutually exclusive may have struck a chord in some American cavalrymen, but a few reactionaries held ideas that must have appeared even more laughable. Flying in the face of military experience since the eighteenth century, The Baron George Marochetti, a captain in an unidentified foreign army, asserted that men on horseback were ten times less vulnerable than dismounted men. He continued: "It takes first-class and well seasoned troops to resist a cavalry charge....I know of very few cases where infantry or even machine gunners have successfully withstood a cavalry charge."[247] Even by the standards of the reaction, the Baron's argument was ludicrous.

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[246]Col. H.S. Stewart (Indian Army), "Mechanization and Motorization: The Final Chapter Has Not Been Written," *CJ* 49 (217 Jan.-Feb. 1940): 40-41.
[247]Capt. The Baron George Marochetti, "What Does Palestine Prove?," *CJ* 48 (211 Jan.-Feb. 1939): 8.

CHAPTER 7.

MAJ. GEN. JOHN K. HERR TAKES THE REIGNS

The Cavalry is anxious to do its part in the expansion of mechanization."

Maj. Gen. John K. Herr
Chief of Cavalry, 1940[248]

I fear on inclination
To swap the horse for mechanization
If we yield to that temptation
Then we're sunk!

Anonymous, 1941[249]

On 26 March 1938, a change took place that would influence profoundly the course of mechanization in the cavalry. Maj. Gen. John K. Herr replaced Kromer as the Chief of Cavalry. Herr's career began inauspiciously. He graduated near the bottom of the Class of 1902 at West Point. Commissioned into the cavalry, Herr served in Philippines and rose to become a division chief of staff in France during the First World War. In the 1920s, he graduated from the Command and General Staff School and the Army War College, remaining at the latter as an instructor until 1930. When Craig tapped him to be the new Chief of Cavalry, Colonel Herr commanded the 7th Cavalry in Texas.[250]

Some scholars have interpreted Herr's elevation to Chief of Cavalry as the horsey set's ultimate attempt to stifle mechanization. David Johnson has argued that Herr's ascent brought an immediate change for the worse for the proponents of mechanization. Herr kept "a single goal in mind — to preserve the horse cavalry," and he moved to end the climate of openness toward mechanization his predecessors had fostered. Furthermore, Johnson

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[248]Maj. Gen John K. Herr to G3, TD, 21 June 1940, File 322.02, Bx 8, RG177.
[249]"Horse Feathers," *CJ* 50 (2 Mar 1941).
[250]Cullum, *Biographical Register* and *The National Cyclopaedia of American Biography*, (New York: James T. White & Co., 468-469.

accused Herr of muzzling the reformers and of creating "an environment where only horse advocates had a voice."[251]

This interpretation is excessively harsh. There is no suggestion that Herr assumed the duties of the Chief of Cavalry with malicious intent. Nor does the record support the notion he deliberately discouraged debate about mechanization. Herr's early tenure as Chief of Cavalry revealed few indications of upcoming change in the arm's official attitude toward mechanization. Shortly after his selection was announced, Herr wrote Kromer: "You are the best Chief we have had, in spite of the fact that you have sometimes disagreed with me. I hope to be progressive like you and at the same time refrain from leading with the chin or right."[252] His first contribution to the *Cavalry Journal* as Chief maintained the tenor of his predecessors. He stressed the importance of mobility, whether derived from the horse or a vehicle. Herr lauded the cavalry spirit at Fort Knox. In his only other comment on mechanization, he asserted "there is no difference between the horse and mechanized cavalry except that caused by the respective qualities of their mounts."[253] Henry and Kromer easily might have published the same article.

Initially, cavalry officers reacted positively to Herr's ascendancy. A captain at the time, future Second World War corps commander Lucian Truscott remembered that the announcement of Herr's appointment was "warmly welcomed throughout the cavalry." He also noted, ominously, that it was not in Herr's nature to tolerate dissent from his own views.[254] For his part, Crittenberger told his friend Senator Henry Cabot Lodge that Herr would make "a splendid Chief. He is smart and aggressive. I have great hopes for him."[255]

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[251]Johnson, 335.
[252]Col. John K. Herr, to Maj. Gen. Leon B. Kromer, TL, 11 Mar. 1938, Box 2, Kromer Papers.
[253]Maj. Gen. John K. Herr (Chief of Cavalry), "My Greetings to All Cavalrymen," *CJ* 47 (206 Mar.-Apr. 1938): 99.
[254]Truscott, 157.
[255]Lieut. Col. Willis D. Crittenberger to Senator Henry Cabot Lodge, 26 Mar. 1938, Box Correspondence Jan.-May 1938, Crittenberger Papers.

With the Tyner's impending reassessment of mechanization policy in the background, Crittenberger warned the new Chief about the cavalry's powerful enemies high in the War Department. He suggested that no matter how important it was to preserve the existing horse units, it would be impolitic for Herr to remain passive on mechanization. He suggested Herr pursue a program that embraced both horse and mechanized cavalry. Crittenberger believed such a program could "serve as a rallying point for all of those many individuals who are anxious to follow your leadership and to lend you their support." Finally, Crittenberger recommended that the expansion of the mechanized cavalry should be the focus of that program and the spearhead of a drive to strengthen the entire cavalry arm.[256]

While working in the Office of the Chief of Cavalry from 1938-1940, however, Crittenberger gradually assumed a more cautious stance in his advocacy of mechanization. This change sprang from both his perceptions of the office's political atmosphere and the evolution of his own responsibilities. Consider his comments on a draft article critical of mechanized cavalry circulated within the Chief's staff in 1939. Concerned that the other arms were exploiting the cleavage within the cavalry, Crittenberger resented its hostile tone and told his Chief:

> As loyal cavalrymen, it would seem to be our plain duty to establish and foster a working relationship between horse and mechanized cavalry. Whether we like it or not, we have had mechanization dumped into our laps, and we've got to make the best of it. If we do not continue to provide it an intelligent leadership, carefully refraining from partisan and exaggerated statements as to what we can or cannot do we will lose it; because there are other branches which would be more than glad to have it.[257]

Crittenberger objected to this attempt to promote horse units by attacking the mechanized cavalry. He felt such divisiveness served no constructive purpose. Since both types of cavalry had their capabilities and limitations, Crittenberger believed that the arm as a whole would be better served by publicity that showed "how each supplements the other

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[256]Lieut. Col. Willis D. Crittenberger to Chief of Cavalry, TD, 4 Aug. 1938, File Correspondence, Jan.-May. 1938, Box Correspondence, 1935-1938, Crittenberger Papers.
[257]Lieut. Col. Willis D. Crittenberger to Maj. Gen. Leon B. Kromer, Chief of Cavalry, TD, 1 Apr. 1939,File Correspondence, Jan.-Jun. 1939, Box Correspondence, 1939-1941, Crittenberger Papers.

together making a strong, versatile team rather than discrediting either player or building up one at the expense of the other." He suggested that the author, Brig. Gen. Hamilton Hawkins, a noted critic of mechanization, visit the 7th Cavalry Brigade (Mechanized) so that he might benefit from some first-hand knowledge of mechanization. Thinking back on his own tour of duty at Fort Knox, Crittenberger wrote that he had "failed signally" in not getting Hawkins to visit the mechanized cavalry earlier.[258]

While he remained committed to the advancement of mechanized cavalry, Crittenberger's service in the Office of the Chief of Cavalry also proved his abiding interest in the welfare of the whole arm. During those years, he received many letters from young officers seeking career advice.[259] To one junior officer who solicited his advice, Crittenberger replied that the mechanized cavalry was here to stay. He encouraged the captain to pursue an assignment at Fort Knox, but he attached a comment that showed he recognized of the limits of mechanization. Crittenberger wrote:

> I believe it would be advantageous for you to become affiliated with in its infancy. You know this does not mean that I think every soldier is going to heaven in a combat car; mechanization, for the present at least, is not going to take the place of the infantry man or horse cavalryman.[260]

When another officer appealed for help in getting a second assignment with the mechanized cavalry, Crittenberger discouraged him. He suggested instead that the officer serve with the horse cavalry division so that he might complete his professional education. Crittenberger quipped there would be plenty of time to get back to the mechanized unit.[261]

Still, Crittenberger's heart was set on mechanization. As Herr's position on the issue hardened, Crittenberger found himself in the difficult position of being a reformer working for an obstructionist. Nonetheless, he salvaged some peace of mind from the fact

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[258]Ibid.

[259]For example both L.K. Ladue and William S. Biddle asked for help getting assigned to mechanized cavalry in December 1937. See numerous examples in Box Correspondence 1935-1938, Crittenberger Papers. Crittenberger was not the involved in making assignments, but like the other men in that office he was believed by outsiders to have had some influence. The extant correspondence of other officers who served in the Office of the Chief of Cavalry includes similar materials directed to them.

[260]Lieut. Col. Willis D. Crittenberger, to Capt. L.K. Ladue, TL, 28 Feb. 1938, Box Correspondence 1935-38, Crittenberger Papers.

[261]Lieut. Col. Willis D. Crittenberger, to Capt. I.D. White, TL, 9 Jan. 1939, Box Correspondence 1939-41, Crittenberger Papers.

that "eventually when the Army and the Congress become fully aroused to the possibilities of mechanization, then and not until then, can we expect fulfillment of our expectations. In the meantime... I am in here pitching."[262] And pitch he did. Crittenberger stands out as a voice of reason in the Office of the Chief of Cavalry as the weight of blind conservatism took hold in the Fall of 1939 and Spring of 1940.

Grow also spent the late 1930s in the Office of the Chief of Cavalry, managing logistical and budgetary matters. This position gave him a unique perspective on mechanization. Grow's passionate adherence to the idea that mechanization was a natural step in the evolution of cavalry distinguishes him from the reformers. Chaffee, Van Voorhis, and Crittenberger all abandoned the hope that their arm eventually would accept mechanization much more quickly than did Grow. He spoke for the majority of cavalry officers who found themselves caught between their love for the horse and the lure of mechanization:

> To be painted as a "horse" cavalryman savors too much of hidebound tradition. To be pointed out as a "mechanized" cavalryman savors too much of a scatter-brained enthusiast without his feet on the ground. The great majority of cavalry officers today are neither old-fashioned or wild dreamers. They have their feet on the ground. They recognize the role of cavalry in war, and are boldly (as befits cavalrymen) but carefully weighing the means at hand and possibilities of its future development to make better Cavalry.[263]

Grow provides an interesting example of the progressive officer's dilemma. Commissioned from the National Guard on the eve of the American entry into the First World War, Grow's interest in mechanization began in the late 1920s. He believed "the mounted fightingman required a better firing platform for his weapons than the back of a horse."[264] By 1930, Major Grow served as the executive officer of Van Voorhis' horse cavalry regiment. He accompanied Van Voorhis to the Mechanized Force, serving first as its operations officer then as the executive officer. From 1931 until 1934, Grow worked

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[262]Lieut. Col. Willis D. Crittenberger to Maj. Gen. Adna R. Chaffee, Jr., 20 Dec. 1939, File Correspondence, Operations Section, Office of the Chief of Cavalry, Jul.-Dec. 1939, Box Correspondence, 1939-1941, Crittenberger Papers.
[263] Robert W. Grow, "One Cavalry," *CJ* 42 (206 March-April 1938): 150.
[264]Grow to Nenninger, TLS, 10 Jun. 1967.

on the staff of the fledgling mechanized cavalry regiment and played an important behind-the-scenes role in its early development. He briefly taught mechanization at the Command and General Staff School before taking an assignment in the Office of the Chief of Cavalry in 1937.

Grow's first public foray into the debate came in response to one of Hawkins' attacks on the mechanized cavalry. Using a metaphor from animal husbandry, Grow explained why progress in the breeding of armored vehicles would solve contemporary problems with their reliability and cross-country mobility. While its off-road mobility was "far from satisfactory," Grow maintained, "our present mechanized cavalry can hardly be called road-bound." He defiantly rejected Hawkins' implication that mechanized units were not truly cavalry. "The objective is a mechanized cavalry that is CAVALRY in every sense of the word, with the added advantages of speed and power beyond that of our present horse units," Grow insisted. Grow made as strong a case as possible for the acceptance of mechanization as a full partner in the arm. He insisted:

> Cavalry, as a whole, is more effective when horse and mechanized units are employed in cooperation than when either is employed alone." "Proper teamwork between horse and mechanized cavalry will constitute the most important problem confronting our senior cavalry commanders for years to come.... Present day mechanized cavalry is struggling with its immature means to become, not tanks, not "mechanized forces," but true CAVALRY.... Cavalry has accepted mechanization; Cavalry likes it; and as far as Cavalry is concerned, mechanization is here to stay and to be fostered in every way.... In our Cavalry we do not want a 'mechanized force' of tanks in the European sense. WE DO WANT A MECHANIZED CAVALRY THAT IS CAVALRY IN EVERY SENSE OF THE WORD.[265]

Grow continued to appeal for harmony within the arm. Indeed Grow demanded: "*It is high time to drop all this controversy between horse and mechanized and get together as cavalrymen.*" Both horses and mechanization, he insisted, "provide the means by which men properly organized and trained can become Cavalry." "Cavalry stands above its means," he continued, adding that "its continued existence depends upon its ability (and

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[265]Maj. Robert W. Grow, "Mechanized Cavalry," *CJ* 47 (205 Jan.-Feb. 1938): 30-31. Emphasis in original.

willingness) to grasp every available means to increase its battlefield mobility and power."[266]

Meanwhile, the debate over specific elements of the organization of the mechanized cavalry division continued to rage. Van Voorhis again raised objections to Craig's decision to pursue a three-regiment division. He expressed concerns that the size of the proposed division would exacerbate conflicts between the cavalry and the other arms. Adding infantry to the division, for example, would lead that arm to demand a say in the division's doctrine and organization. The creation of an mechanized cavalry division was "a fine argument for the organization of a mechanized force." But, warned Crittenberger, "If the branches and services involved are to make such a strong contribution you can rest assured that they will insist upon dictating policies and employment, and the cavalry will find themselves out of the picture."[267] In June 1938, Craig yielded to Van Voorhis and ordered the Chief of Cavalry to change his plans. After gathering additional information from Fort Knox, Herr sent forward a new plan for a two-regiment division in October.[268]

That month, as well, Herr kicked off his program of promoting the expansion of the entire cavalry arm. He suggested to Craig that any expansion of the U.S. Army in response to a European war should include an increase in cavalry. Herr suggested that up to one quarter of the Army should be cavalry. He expressly asked for more horse cavalry. Herr considered the expansion of the horse cavalry absolutely essential because the mechanized cavalry "has not yet reached a position in which it can be relied upon to displace horse cavalry. For a considerable period of time it is bound to play an important but minor role." In words that could hardly have encouraged the reformers, Herr concluded:

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[266]Maj. Robert W. Grow, "One Cavalry," *CJ* 48 (206 Mar.-Apr. 1938): 150. Emphasis in the original.
[267]Brig. Gen. Daniel Van Voorhis to Lieut. Col. Willis D. Crittenberger, 11 Jul. 1938, Box Correspondence, 1938 Jun.-Aug, Crittenberger Papers.
[268]Lieut. Col. Willis D. Crittenberger, to Lieut. Col. Raymond E. McQuillin, TL, 30 Jan. 1939, Box Correspondence 1939-41, Crittenberger Papers.

> Throughout all history there have been times when Cavalry has been deemed out-of-date and no longer useful but on each occasion there has always emerged some man of vision to properly arm it, equip it, organize it, and use it in large masses to play decisive roles in campaign. We must not be misled to our own detriment to assume that the untried machine can displace the proven and tried horse.[269]

He also called on the chief of staff to create a cavalry corps of three horse and one mechanized cavalry divisions.

A few days later, Herr met with Maj. Gen. Robert M. Beck, now the Chief of the Operations Section. They agreed that the creation of a mechanized cavalry division was "desirable and in highest priority." Beck told Herr to make sure his plan conformed to that of Van Voorhis to speed its approval. Herr, however, still insisted an equal increase in the horse cavalry. He remained unwilling to forfeit a single animal or man from the horse cavalry to create the new mechanized units. While he supported the mechanized cavalry division, he complained that the cavalry had "already been bled white." Herr also objected to what he saw as an especially harmful War Department practice of drawing from the cavalry's personnel pool to create special elements such as the Air Corps and antitank units. Beck, nonetheless, showed little enthusiasm for any increase in the horse cavalry. He pointed out that Craig never would approve a new infantry or cavalry division, but he would support a mechanized cavalry division.[270]

Why Herr adopted this line of attack remains unclear. One explanation may be the close association between Hawkins and Herr.[271] This relationship may have led Herr to adopt a more conservative attitude toward the expansion of mechanization than he otherwise would have pursued. Herr also may have reached this decision based upon his belief that the horse cavalry was so understrength that its needs outweighed those of the mechanized cavalry. This was a fatal mistake. Rather than using the mechanized cavalry to spearhead progress for the horse units as Crittenberger had suggested, Herr did the

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[269]Maj. Gen. John K. Herr, to Chief of Staff, TD, 17 Oct. 1938, File 322.02 Cavalry, Box 7, RG 177.
[270]Lieut. Col. Robert W. Grow, to Chief of Cavalry, Sub: "Notes on Conference Held 7 October, 1938," TD, File 337, Box 15, RG 177. and Maj. Gen. John K. (Ret.) Herr, to Maj. Gen. Robert K. Grow, TLS, 7 Jun. 1945, Grow Papers.
[271]Grow, "The Ten Lean Year," 82.

opposite. By abandoning the progressive policies of Henry and Kromer, Herr further exacerbated the tensions between conservatives and reformers, inadvertently playing into the latter's hands. Cavalry officers now faced a stark choice. They could either support Herr's policy of tying progress in mechanization to an increase in horse cavalry's strength or accept the reformer's argument that the needs of the mechanized cavalry should take precedence.

Crittenberger immediately objected to Herr's new position. He believed that, comparatively speaking, the horse cavalry represented a mature and stable organization, while the mechanized cavalry was still in its infancy. The policy of linking their expansion was illogical, because it precluded the sensible development of the new weapon. Crittenberger warned that any increase the horse cavalry should stand on its own merits. He also tried to convince the Chief that increases in the mechanized cavalry would not harm the horse cavalry; rather it would increase the prestige and influence of the Chief of Cavalry. Likewise, Crittenberger suggested that the completion of a mechanized cavalry division might provide the leverage needed to bring the cavalry corps up to strength.[272] Interestingly, when Chaffee became aware of the Chief's new position, he reassured Herr that he would only seek increases in the mechanized cavalry from increases in the total Army strength.[273]

The debates surrounding the expansion of the mechanized cavalry in the late 1930s precipitated a strong conservative reaction. After his 1931 attack on the mechanized force, Hawkins had been fairly quiet. After May 1937, though, he had a unique platform for making his influence felt. He authored "General Hawkins' Notes," a *Cavalry Journal* feature appearing in every issue .[274] In this forum, Hawkins pontificated on cavalry affairs

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[272]Lieut. Col. Willis D. Crittenberger to Chief of Cavalry, TD, 22 Nov. 1938, File Correspondence, Sep.-Dec. 1938, Box Correspondence, 1935-1938, Crittenberger Papers.
[273]Gillie, 112.
[274]Brig. Gen. Hamilton S. Hawkins, "General Hawkins' Notes," *CJ* 46 (201 May-Jun. 1937): 239. The May-June 1938 issue had a full page dedicated to exalting Hawkins as the penultimate cavalryman. See Maj. Henry P. Ames, "The Cavalry Role," *CJ* 47 (207 May-Jun. 1938): 36.

and sermonized on the merits of the horse. Often his arguments betrayed his own ignorance of mechanization. At one point, he asserted that half-tracked vehicles had nothing to offer, reasoning that "they cannot carry thickly packed soldiers at speed across country without unduly fatiguing or injuring the men." Hawkins also insisted such vehicles were "very expensive and require unbelievable quantities of gas and oil."[275] There was no basis in fact for either charge. Like most of his arguments against mechanization, they were founded on hearsay and Hawkins' own deeply felt prejudices.

As a conservative, Hawkins was willing to tolerate some mechanization in the cavalry. He envisioned the combined operations of horse and mechanized cavalry. Horse units would lead the mechanized cavalry during the execution of offensive and covering operations. Then, mechanized cavalry would neutralize the enemy's mechanized units and fire in support of horse cavalry maneuvers. At one point, Hawkins sounded almost enthusiastic, writing "*a cavalry command containing both horse cavalry and mechanized cavalry* would certainly have a great advantage in attacking enemy mechanized troops, or indeed any troops." Hawkins thrilled at the thought of a new cavalry combining the merits of new and old: "The use of horse and mechanized cavalry in combination is so attractive to the imagination of the student of tactics and so full of possibilities for great success that the matter deserves the most careful consideration."[276]

Hawkins' support for mechanization ended when it encroached on the horse cavalry, however. He criticized European armies for their aggressive mechanization policies, which suffered from a "lack of imagination or imagination gone wild." Hawkins continued:

> There is no foundation of knowledge, a sheep-like rush toward mechanization and motorization without clear thinking or any apparent ability to visualize what takes place on the field of maneuver or the battlefield, has led to a foolish and unjustified discarding of horses.[277]

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[275]Brig. Gen. Hamilton S. Hawkins, "General Hawkins' Notes - The Support of Cavalry by Motorized Infantry," *CJ* 48 (212 Mar.-Apr. 1939): 171-172.
[276]Brig. Gen. Hamilton S. Hawkins, "General Hawkins' Notes - The Combination of Horse Cavalry with Mechanized Cavalry," *CJ* 47 (209 Sep.-Oct. 1938): 461-462.
[277]Brig. Gen. Hamilton S. Hawkins, "Imagination Gone Wild," *CJ* 47 (210 Nov.-Dec. 1938): 491.

In the Fall of 1939, in the face of increasing pressure on the horse cavalry, Hawkins' position hardened. Ironically, as German armored troops ripped through a Polish Army well supplied with horse regiments, Hawkins argued, "We must have Cavalry." He attacked "a gullible and novelty loving public" which had become infatuated with planes, tanks, and submarines. Hawkins lamented:

> Very few persons understand how cavalry, especially American cavalry, is equipped, organized and trained, or how it fights and its effectiveness in fighting. The employment of cavalry in war is not understood at all by the people of our country.[278]

Hawkins insisted it would be foolish to rely on mechanized units for the cavalry's missions. It was simply too vulnerable and limited in its scope of action. Only horse cavalry could be relied upon to furnish mobile combat power under all conditions. He acknowledged the importance of mechanization, but added it could be nothing more than a special-purpose weapon in the cavalry arsenal. Hawkins restated all his "facts" about the viability of the horse. He argued that tanks in the attack were less effective than mounted men! Unable to fire accurately on the move, tanks would blunder aimlessly about the battlefield until the defenders' massed fires knocked them out or so Hawkins figured. On the other hand, horse cavalry could dismount and fight like infantry or attack "by successive waves of horsemen passing over the enemy, using with deadly effect their automatic pistols." In making this argument, Hawkins selectively ignored the fact that attacking tanks might fire from short halts — as American mechanized cavalrymen trained to do. He ended with the plea: "Certainly it is foolish to give up regiments of cavalry, already many times too few, to turn them into tank organizations whose worth has not been proven."[279]

The following month, chastened by the Germans' great success in Poland, Hawkins struck a more moderate stance, observing:

> I have been told that I am considered by the enthusiasts for mechanization as hostile to the development of mechanized force in our army. This is not true. But I

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[278]Brig. Gen. Hamilton S. Hawkins, "We Must Have Cavalry," *CJ* 46 (203 Sep.-Oct. 1937): 405.
[279]Ibid., 405-407.

> am decidedly hostile to the ideas of those who would replace cavalry by mechanization.[280]

Hawkins restated his support for the idea of combined horse-mechanized operations. He grudgingly admitted that a few American "panzer" divisions "might be useful." Excusing the Polish cavalry's failure as the result of improper equipment, training, and employment, Hawkins meekly argued that "there is no use... in trying to prove anything for or against any branch of the service by reference to the Polish campaign."[281] His contrition was shortlived. By March 1940, Hawkins again reverted to his old form, arguing that the German panzers had done no more than good cavalry could be expected to do.[282]

Despite his prominence, Hawkins represented only a single voice among the cavalry's conservatives. Outsiders added to the calls for a conservative approach to the mechanization of the cavalry. One infantry officer argued that it cost as much to equip one scout car troop as it did to provide mounts for three horse cavalry regiments. He added that a single radio cost the same as twenty-five horses. The author avoided the question of the return on those investments.[283] On occasion help came from overseas. The November 1939 *Cavalry Journal* included a translation of a German article on the performance of horses in Poland that argued that horse cavalry kept pace with the mechanized spearheads. The horse had played an important role in that victory.[284]

In the late 1930s, reserve officers joined the chorus of calls for a cautious approach to mechanization. A reserve lieutenant joined the defense of the horse cavalry against it mechanization-minded critics. He lauded Hawkins' "We Must Have Cavalry," criticized the anti-horse press, and called for a "propaganda campaign to instill the truth in the public."[285] Brig. Gen. Henry J. Reilly, publisher of the influential *Army and Navy*

280Brig. Gen. Hamilton S. Hawkins, "General Hawkins' Notes - Obvious Conclusions," *CJ* 48 (216 Nov.-Dec. 1939): 516.
281Ibid.
282Brig. Gen. Hamilton S. Hawkins, "General Hawkins' Notes - Conclusions Drawn from First Army Maneuvers," *CJ* 49 (218 Mar.-Apr. 1940): 164-165.
283Lieut. Col. Bernard Lentz, "A Justification of Cavalry," *CJ* 44 (187 Jan.-Feb. 1935): 9-10.
284 "The Horse in Poland," *CJ* 48 (216 Nov-Dec 1939): 511.
285First Lieutenant Cavalry - Reserve, "Letter to the Editor," *CJ* 46 (204 Nov.-Dec. 1937): 555-556.

Journal, expressed the same concern about the public's knowledge about the horse cavalry. He perceived three common misconceptions: the cavalry relied upon the massed charge and edged weapons; it charged trenches; and was hopelessly slower than automobiles. Reilly believed these misconceptions created an image "as far removed from what modern cavalry should be as the horse and buggy age ...is removed from today's age of the automobile." Reilly bemoaned the passing from influence of experienced warfighters who appreciated cavalry. Rather than confirming the obsolescence of horse cavalry, he argued the Polish campaign showed how cavalry, if it acted alone and without modern weapons, could fail. Reilly insisted that the experience in the Spanish Civil War showed that Polish cavalry might have defeated the German armored attack had it had been massed, modernly armed, and supported by aviation and mechanized cavalry.[286]

Conservatives found other ways to make their case. Robert W. Porter remembered how the commanding general of the 1st Cavalry Division made public his reservations about mechanization. He staged a demonstration for the press to compare the mobility of a scout car and horsemen. In loose sand and mesquite — a thorny bush that punctures tires — the horse had his day.[287]

Despite Chaffee's reassurances, relations between Herr and the reformers deteriorated rapidly. Herr called upon cavalrymen to "demonstrate to the people of this country the truth concerning the efficiency and worth of American Cavalry," an obvious reference to horse units. He believed the mechanized cavalry had "not yet the capacity for sustained action that is inherent in horse cavalry."[288] The following month, Herr next told Congress that the cavalry faced the problem of finding the correct mix of horse and mechanized units. When asked to justify the continued existence of horse cavalry, Herr detailed the changes made in the mounted regiments to increase their effectiveness,

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[286]Brig. Gen. Henry J. Reilly, "Horsed Cavalry and the Gas Engine's Children," *CJ* 49 (217 Jan.-Feb. 1940): 2.
[287]Gen. Robert W. Porter, Jr., interview by Lieut. Col. John N. Sloan, 1981, TDS, Senior Officer Oral History Program, USAMHI, Vol. I, 179-180.
[288]Maj. Gen. John K. Herr (Chief of Cavalry), "What of the Future?," *CJ* 48 (211 Jan.-Feb. 1939): 4-6.

comparing it favorably to mechanized cavalry. The two were complementary in his eyes. Still, Herr's public criticism of the mechanized cavalry betrayed his own failure to appreciate its state of development.[289] After a visit to Fort Knox in May, Herr informed Kromer in a letter:

> I am more convinced than ever that I am on the right track with respect to the limitations and uses of the mechanized cavalry. It has not within itself any of the inherent elements necessary for complete reconnaissance nor for security missions. It is more fragile than horse cavalry and I believe its best use will be in cavalry corps where it will be screened and protected by the horse cavalry and reserved for moments when it can be used to best advantage to obtain a common objective. [290]

In the same letter, he stated he was still uncertain where Gen. George C. Marshall, the new chief of staff-designate, stood on cavalry. Herr said he had "tried to sound him out several times ... but he appears very noncommittal."[291]

As a part of his program to improve the cavalry, Herr continued his efforts to modernize the horse cavalry. In the Fall of 1939, he got permission from the War Department to test a new horse-mechanized organizational scheme for the cavalry regiments assigned to each army corps. This was the porteé unit, trucks to move horsemen and their mounts to the battlefield where they operated on horseback. This idea had been around since the First World War; however, its first major test came during the 1st Cavalry Division maneuvers in 1928. Thirteen three-ton trucks each carried six troopers and their horses. Participants concluded that unsatisfactory equipment hampered the test. They observed that the time required for loading and unloading made porteé inefficient for marches of less than forty miles.[292]

Presumably for lack of money, the porteé concept languished until it was revived by the Chief of Cavalry in the late 1930s. The new units featured a porteé horse cavalry squadron paired with a lightly armored mechanized cavalry one. (See Figure 5.2) Instead

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[289]"Cavalry Affairs Before Congress," *CJ* 48 (212 Mar.-Apr. 1939): 130, 132-133.
[290]Col. John K. Herr, to Maj. Gen. (Ret.) Leon B. Kromer, TL, 12 May 1939, Box 2, Kromer Papers, 1.
[291]Ibid.
[292]Maj. George Dillman, "1st Cavalry Division Maneuvers," *CJ* 37 (150 Jan. 1928): 63-65.

of combat cars, the mechanized squadron had two scout car troops and one mounted on motorcycles. The regiment's service troop included seventy-four tractor trailers for hauling the horses. Herr originally sought a two-to-one mix of porteé to mechanized cavalry squadrons in the regiments, but the General Staff's manpower concerns limited him to a single squadron of each kind.[293] The Army intended that these units would give a corps commander an all-weather, all-terrain cavalry force to augment the single cavalry troop organic to each of his three infantry divisions.[294] The absence of combat cars limited the regiment to reconnaissance and security missions that entailed minimal fighting.

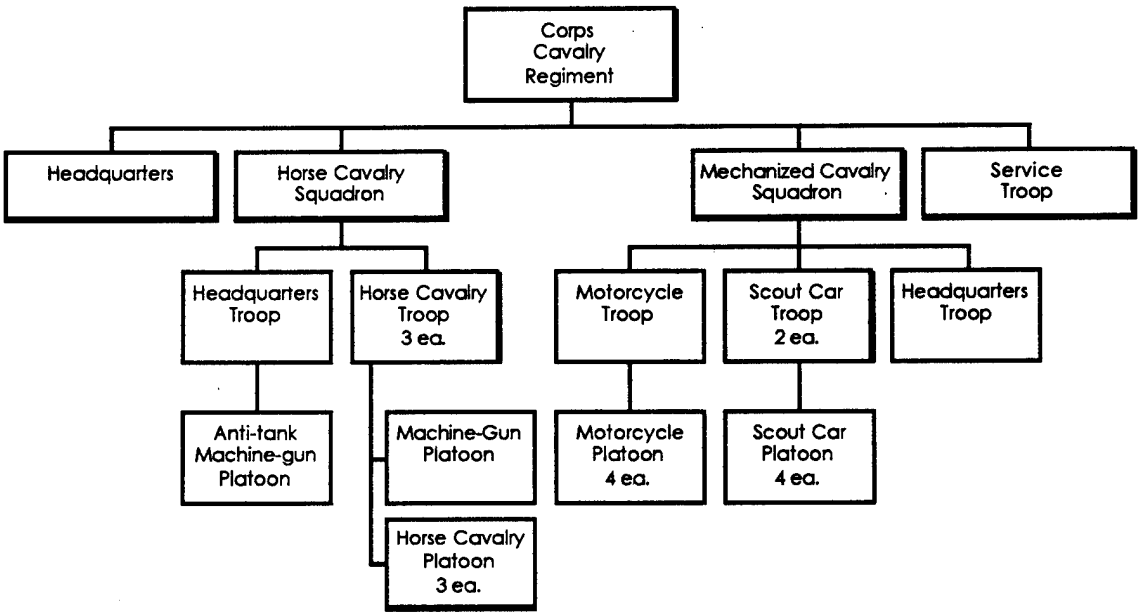

Figure 7.1 Corps Cavalry Regiment, February 1941 This is the same organization tested by the Corps Cavalry Regiments in the Spring of 1940. Note the absence of combat cars in the mechanized cavalry squadron. The porteé trucks and trailer belonged to the service troop.

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[293]Lieut. Col. Willis D. Crittenberger to Lieut. Col. Paul R. Davison, TL, 20 OCT 1939, File Correspondence, Operations Section, Office of the Chief of Cavalry, Jul.-Dec. 1939, Box Correspondence, 1939-1941, Crittenberger Papers; Adjutant General, to Chief of Cavalry, Chief of Operations Section - Office of the Chief of Cavalry, Sub: "Cavalry Regiment Horse, Mechanized," TDS, 8 Nov. 1939, File 322.02 Cavalry Regiment, Horse + Mechanized, Box 7b, RG 177; and Col. K.S. Bradford, to Adjutant General, Chief of Operations Section - Office of the Chief of Cavalry, Sub: "Corps Reconnaissance Regiment," TDS, 19 Sep. 1939, File 322.02 Cavalry Regiment, Horse + Mechanized, Box 7b, RG 177.
[294]Col. John Millikin, Commander 6th Cavalry, Sub: "The Corps Cavalry Regiment," TD, (15 Jan. 1940?), Box 3, RG 177.

This organization failed in tests during the Spring of 1940. Col. John Millikin, commander of one test regiment, reported that insufficient numbers of trucks and trailers hamstrung his porteé squadron. He observed without further comment that while non-commissioned officers proved capable of leading horse platoons, they were not up to leading the regiment's mechanized cavalry platoons.[295] Another officer observed that no one seemed to know what to do with the porteé squadron. Their trailers were cumbersome and it took too long to load and unload their horses and men.[296] Other reported that these tasks only required fifteen minutes, but they must occur beyond enemy artillery range. This posed a serious problem for the employment of the regiment's units together. The maneuvers revealed an even more serious problem with this hybrid horse-mechanized unit. As Col. Robert C. Rodgers, commander of another test regiment during the 1940 maneuvers, commented: "It appears... that the reconnaissance by the horse squadron and the operations of the remainder of the regiment are so separated physically that the horse squadron can not properly constitute a part of the same team."[297]

Nonetheless, Herr clung to the idea of combined horse-mechanized units. Perhaps, one reason was that so many horsemen found great pleasure serving with these units. As Bruce Palmer, Jr., recalled:

> We...had the best of two worlds,...We still had polo and horse shows with the 1st Squadron and I could play on the Regimental polo team and hunt with our fox hounds, yet I could also command a troop of mechanized cavalry and learn my profession.[298]

Many cavalrymen hoped in vain that this hybrid organization would help carry horse units into the future. By 1941, the cavalry had converted all seven of its National Guard corps cavalry regiments to this scheme.[299] Their poor performance in the First Army maneuver

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[295]Col. John Millikin, Commander 6th Cavalry, to Chief of Cavalry, Sub: "Report on Operations of the 6th Cavalry," TD, 2 May 1940, Box 3, RG 177.
[296]Gen. Bruce Palmer, Jr., interview by LTC James E. Shelton and LTC Edward P. Smith, Senior Officer Oral History Program, USAMHI., 80-81.
[297]Col. Robert C. Rodgers, to Adjutant General, Commander 4th Cavalry, Sub: "Final Report on Organization of Corps Cavalry Regiment," TD, 12 Sep. 1940, File 322.02 4th Cavalry, Box 7b, RG 177.
[298]Palmer, Senior Officer Oral History Program, 77-79.
[299]Herr and Wallace, *The Story of the U.S. Cavalry,* 248-249.

that year finished the concept forever, however. The combination of horse and mechanized cavalry in a single tactical organization simply proved unworkable.[300] The horse and mechanized squadrons' tactical mobility varied too greatly to enable them to operate as part of a single organization. This realization came too late to make much difference in the debate over mechanization. The cavalry tested porteé units after most progressive officers had already seen the future in mechanization. Still, for much of the interwar period, the imagined potential of a unit combining horse and mechanized cavalry was great enough to pose a stumbling block for reform.

While Herr explored the horse-mechanized organization, the General Staff practically ignored his October 1938 plan for the mechanized cavalry division. Therefore, Herr submitted another plan in April 1939.[301] Van Voorhis reiterated to Craig his support for the mechanized cavalry division and asked him to ignore the new plan.[302] Van Voorhis's opinion carried great weight on this issue. He spoke with authority gained from a long association with mechanization, and as the commanding general of the Fifth Corps Area — the regional headquarters that encompassed Fort Knox — he had direct responsibility for the development of mechanized cavalry brigade. Furthermore, as a permanent major general, Van Voorhis outranked Herr, whose general officer rank was only temporary.

Maj. Gen. Robert M. Beck, the Chief of the Operations Section of the General Staff, was not yet ready to discard the Chief of Cavalry's ideas. He agreed that the mechanized cavalry brigade needed augmentation whether or not it remained a brigade or was redesignated as a division. He recommended that Herr be given a year to experiment

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[300]Christopher R. Gabel, *The U.S. Army GHQ Maneuvers of 1941*, (Washington, D.C.: Center of Military History, United States Army, 1992), 118-119. Herr would continue to pursue this concept long after it had been discredited. See Maj. Gen. John K. Herr, to Adjutant General, Chief of Operations Section - Office of the Chief of Cavalry, Sub: "Cavalry Reconnaissance Units," TD, 23 Jan. 1942, File 322.02, Box 7a, RG 177, 1-2.

[301]Col. G. Kent, Executive Officer Office of the Chief of Cavalry, to G-3, Sub: "Manpower Request for Mechanized Cavalry Division," TD, 19 Apr. 1939, File 322.02 Mechanized Cavalry, Box 7, RG 177.

[302]Maj. Gen. Daniel Van Voorhis, to Gen. Malin Craig, TLS, 17 May 1939, File AG537.3, Box 2700, RG 407.,

with the mechanized cavalry's organization.[303] Brig. Gen. George P. Tyner, now the Assistant Chief of Staff for Logistics (G-4), objected to the proposed mechanized cavalry division, however. He believed the Regular Army needed only a single mechanized brigade as a "highly technical auxiliary force." Echoing Herr, Tyner argued against expanding the mechanized cavalry at the expense of horse units. "Further reduction of the Regular Army horse cavalry," he said, "should be made with great caution and for impelling [sic] reasons. Our Mexican Border situation alone warrants the maintenance of at least two complete horse cavalry divisions in the Regular Army."[304]

Faced with conflicting advice, Craig reversed his support for a mechanized cavalry division, now preferring instead to create a second mechanized cavalry brigade.[305] Chaffee opposed this idea. Already dissatisfied with the mechanized cavalry brigade's current organization, he saw no utility in creating another brigade. Hoping to of break the gridlock, Chaffee flew to Washington in late March 1939 to lobby the chief of staff himself. He was disappointed with the results. The retiring Craig did not want to commit Marshall to any course of action on mechanization. He did decide to scrap plans for a second independent brigade. Chaffee returned to Fort Knox depressed by his inability to garner support for organizing a mechanized cavalry division.[306]

Herr's relations with the reformers and the mechanized cavalrymen had reached the breaking point. Grow wrote in his diary that "Herr is distrusted at Knox. All Knox people think he is against them."[307] When Capt. Earnest Harmon, a young cavalry officer completing a tour on the General Staff, told the Chief of Cavalry that he "wanted to go to tanks to learn about the new kind of combat. General Herr told me I could expect no more

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[303]Brig. Gen. R.M. Beck,G-3, to Chief of Staff, Sub: "General Van Voorhis' Letter on Mechanization," TDS, 24 May 1939, File AG537.3, Box 2700, RG 407.
[304]Brig. Gen. George P. Tyner, G-4, to G-3, Sub: "Equipment for Mechanized Cavalry," TD, 5 Jun. 1939, File 322.02 Mechanized Cavalry, Box 7, RG 177, 2.
[305]Lieut. Col. H.R. Bull, Secretary of the General Staff, to G-3, Sub: "Mechanized Cavalry Division," TD, 12 May 1939, File 322.02 Mechanized Cavalry, Box 7, RG 177.
[306]Gillie, 116-118.
[307]quoted in Grow, "The Ten Lean Year," 84.

friendship from the Office of the Chief of Cavalry."[308] Still, there was some cause for hope among the mechanized cavalrymen. Crittenberger informed Van Voorhis that "it appears that things are now moving to a showdown in which I cannot help but feel that right and common sense will prevail." He expected movement to occur when Marshall took over as chief of staff.[309]

The next six months bore out Crittenberger's prediction. Progressive cavalrymen finally got irrefutable proof that mechanization was ready to provide mobile combat power. Changes in the War Department, maneuvers in the field, and the war in Europe combined to forge a consensus in favor of mechanization. This shift in attitude collided with Herr's intransigence. This in the end caused the cavalry to lose control of mechanization. By this time, Chaffee and Van Voorhis were both general officers with great authority in the realm of mechanization within the War Department. These two men and their allies used the Germans' success in Poland and France to drive a plan through the General Staff to create a wholly separate mechanized arm apart from the cavalry.

Convinced that he saw another study of mechanization in the offing, Chaffee seized upon the German triumph over Poland in September 1939 to revive plans for a mechanized cavalry division. He recommended to Marshall a new course for mechanization policy. In it, he called for the immediate expansion of the mechanized cavalry brigade along the two-regiment lines he and Van Voorhis had long advocated. Chaffee pointed to German operations in Austria, Poland, and Czechoslovakia as confirmation that mechanized units could be a decisive weapon. His conclusions about the relationship between horse and mechanized cavalry amounted to a direct attack on Herr's policies. Chaffee argued:

> In any important war involving armies and fought in terrain where important wars are fought, mechanized cavalry is a vastly more powerful, mobile and decisive

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[308]Harmon went to 1st Cavalry (mechanized) anyway. Earnest N. Harmon, "Personal Memoirs."
[309]Lieut. Col. Willis D. Crittenberger to Maj. Gen. Daniel Van Voorhis, Headquarters 5th Army, TL, 6 Jun. 1939, File Correspondence, Jan.-Jun. 1939, Box Correspondence, 1939-1941, Crittenberger Papers.

> force than am equal or greater force of horse cavalry. I believe that a nucleus of horse cavalry should be kept for mountain, desert or tropical expeditions.[310]

Even more, Chaffee called for the creation of a mechanized cavalry division "at the expense of existing horse cavalry." He believed that this would be the quickest way to secure the needed manpower without becoming embroiled in interarm conflict.[311] Chaffee also turned to Congress for support, sending them copies of his address to the Army War College in which he called for the immediate formation of four mechanized cavalry divisions.[312]

As the Fifth Corps Area commander and Chaffee's immediate superior, Van Voorhis added the first indorsement to Chaffee's proposal. He stated flatly that he agreed completely with Chaffee. In another slap at Herr, Van Voorhis insisted that progress in mechanization need not require a new arm, "if respective chiefs of branches understand their missions and carry them out under War Department directives." He added that "no one can appreciate more than I the struggle against opposition that has been encountered" by partisans of mechanization since 1930.[313]

Herr issued a fairly moderate response to Chaffee's suggestions, perhaps reflecting Grow's influence as the document's principle author. Herr believed that Chaffee's ideas merited study and consideration. He stressed time and time again that he had long and vigorously sought the expansion of the mechanized cavalry. He also believed the time had come to recognize mechanized cavalry as a full-fledged element of the Army. Only on the method of expansion did Herr disagree openly with Chaffee, suggesting "it is unnecessary

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[310]Brig. Gen. Adna R. Chaffee, Jr., to Adjutant General, Sub: "Some observations and Recommendations Pertinent to any future expansion and development of mechanized cavalry which may be contemplated by the War Department," TD, 15 Sep. 1939, File 322.02 Mechanized cavalry, Box 7, RG 177.
[311]Ibid.
[312]Gillie, 140-147 and Brig. Gen. Adna R. Chaffee, Jr., "Mechanized Cavalry," Address to Lecture delivered at the Army War College, Washington, D.C., 29 Sep. 1939, TD, Box 1 Maneuvers 1938-1939, RG 177, Records of the Mechanized Cavalry Board, 32-33.
[313]Maj. Gen. Daniel Van Voorhis, First Indorsement, 18 Sep. 1939, to Brig. Gen. Adna R. Chaffee, Jr., to Adjutant General, Sub: "Some observations and Recommendations Pertinent to any future expansion and development of mechanized cavalry which may be contemplated by the War Department," TD, 15 Sep. 1939, File 322.02 Mechanized cavalry, Box 7, RG 177.

for me to amplify my often repeated recommendations as to the necessity for strengthening our horse cavalry units."[314]

Marshall's elevation to chief of staff in September 1939 gave Herr an opportunity to press his campaign to reintroduce his own plans to strengthen the entire cavalry. He indicated that events in Poland suggested that the mechanized cavalry should be the vehicle for expanding mechanization throughout the army. He described the proposed American mechanized cavalry division as "fully the equal of the German armored divisions." Faced with Chaffee's call for four mechanized divisions, Herr asked for accelerated equipment deliveries and the creation of a second mechanized cavalry division. Chaffee's influence with Marshall became so strong that Herr felt compelled to tell the Chief of Staff that Chaffee concurred with his plan. True to form, Herr insisted that the manpower needed to carry out this plan should come from new allocations and not from any arm's existing strength.[315]

That same month, Secretary of War Harry H. Woodring held a series of interviews with the individual branch chiefs. Herr wanted to expand the mechanized cavalry brigade to a division, then two divisions, and more. He also wanted to augment the horse cavalry and complained that the War Department habitually shortchanged the cavalry's manpower.[316] At a follow-up meeting the next day, Herr laid out his grand plan to strengthen the arm. Woodring's questions focused exclusively on mechanization, however. He asked Herr what percentage of the cavalry was mechanized and what it cost to form a mechanized cavalry division. Herr answered Woodring's questions without evasion.[317]

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[314]Maj. Gen. John K. Herr, Third Indorsement, 9 Oct. 1939 to Brig. Gen. Adna R. Chaffee, Jr., to Adjutant General, Sub: "Some observations and Recommendations Pertinent to any future expansion and development of mechanized cavalry which may be contemplated by the War Department," TD, 15 Sep. 1939, File 322.02 Mechanized cavalry, Box 7, RG 177.

[315]Maj. Gen. John K. Herr, to Chief of Staff, Sub: "Expansion of Mechanized Cavalry," TD, 3 Oct. 1939, File 322.02 Armored Corps, Box 8, RG 177.

[316]Lieut. Col. K.S. Bradford, Executive Officer, Office of the Chief of Cavalry, Sub: "Conference with the Secretary of War October 3,1939," TD, 3 Oct. 1939, File 322.02 Cavalry, Box 7, RG 177.

[317]Lieut. Col. K.S. Bradford, Executive Officer, Office of the Chief of Cavalry, to Chief of Cavalry, TDS, 4 Oct. 1939, File 322.02 Cavalry, Box 7, RG 177.

Clearly, at this point, senior officers in the War Department had begun to give serious thought to expanding the mechanized cavalry. The new Assistant Chief of Staff for Operations and Training, Brig. Gen. Frank Andrews, proved receptive to the idea of creating mechanized cavalry divisions. However, Herr's refusal to give up mounted strength effectively killed the plan. Unless the chief of staff was willing to overrule the Chief of Cavalry, the personnel were simply unavailable, and Marshall apparently had more pressing concerns.[318] The cavalry missed yet another opportunity because of Herr's intransigence.

Interest in mechanization remained high during the Winter of 1940. Crittenberger informed Chaffee that "everyone who ever had an idea on the subject of mechanization is now feverishly writing memoranda about it." Crittenberger expected that in the Spring the General Staff would give the Third Army the mission of forming a mechanized division for evaluation during its maneuvers that summer.[319] Andrews traveled to Fort Knox for a brigade demonstration and came away enthusiastic. Chaffee hoped this would translate into more support for his plans within the Andrews' staff section. Andrews suggested that Marshall visit Fort Knox in early 1940, but weather prevented the planned trip. In the meantime, Andrews started planning for the inclusion of mechanized troops in Third Army maneuvers scheduled for the coming summer.[320]

In February, the General Staff decided to move on the cavalry's longstanding request for the formation of a mechanized cavalry unit at Fort Riley. Ordered to supply some of the troops for the unit from the school's horse regiment, Herr flew into a bitter rage. He told Andrews that he "reluctantly" would allow 155 men from the 2nd Cavalry (Horse) to be transferred to the new combat car squadron, but he accepted this as a temporary measure only. He had reached his limit on unhorsing. "Any further attempt to encroach on my horse cavalry," he raged, "will be meet [sic] with bitter opposition.

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[318]Nenninger, 177-180.
[319]Lieut. Col. Willis D. Crittenberger to Maj. Gen. Adna R. Chaffee, Jr. TL, 4 Jan. 1940, File Correspondence, Jan.-Mar. 1940, Box Correspondence, 1939-1941, Crittenberger Papers.
[320]Gillie, 151.

Mechanized cavalry is not the major element of our American Cavalry." He continued, "it is high time we stop robbing Peter to pay Paul and trying to make something out of nothing." Finally, Herr delivered an ultimatum: "Under no circumstances will I agree to any further depletion of my horse cavalry." The Chief of Cavalry concluded by asserting he would rather see the new equipment for mechanized cavalry in storage than any more units unhorsed.[321] This memo may have been the last correspondence from Herr to which the General Staff gave any serious attention. By the next month, Grow recorded in his diary, Marshall now completely ignored the Chief of Cavalry.[322] Unfortunately, the Chief of Staff's attitude toward Herr went otherwise unrecorded.

In early May 1940, the Chief of Cavalry clearly knew of a new effort to create a separate mechanized arm. Col. K.S. Bradford, Herr's executive officer, saw a memo one of Andrews' subordinates drafted, but Andrews refused to sign just yet. It asked Marshall to decide between creating a new arm and concentrating of all mechanization under the cavalry. At that point, the second option hardly seemed possible. Bradford suggested that the creation of a new arm for mechanization might be part of a War Department public relations scheme and noted that "certain individuals" stood to gain by such a development.[323] No doubt he was referring to Chaffee and Van Voorhis. Within two weeks, German mechanized units had overrun France. Herr responded by again calling for the creation of a few mechanized cavalry divisions.[324] No one listened. The Secretary of War had placed a moratorium on reorganization plans until after the upcoming summer maneuvers.[325]

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[321]Maj. Gen. John K. Herr, to G-3, Sub: "Personnel Requirements," TD, 28 Feb. 1940, File 322.02 Cavalry, Box 7b, RG 177, 1-2.
[322]Grow, "The Ten Lean Year," 88-89.
[323]Col. K.S. Bradford, Executive Officer, Office of the Chief of Cavalry, to Chief of Cavalry, Sub: "Expansion of Mechanization," TDS, 3 May 1940, File 322.02 Mechanized Cavalry, Box 8, RG 177.
[324]Maj. Gen. John K. Herr, to Chief of Staff, Sub: "Expansion of Mechanized Cavalry," TD, 5 Jun. 1940, File 322.02 Mechanized Cavalry, Box 8, RG 177.
[325]Adjutant General, to Chief of Cavalry, TD, 13 Apr. 1940, File 322.02 Cavalry Organization, Box 8, RG 177.

The May 1940 Third Army maneuvers in Louisiana proved to be an unmitigated disaster for the cavalry. Support for mechanization coalesced during these maneuvers. Not only did they give the mechanized cavalry a forum to demonstrate its potential, the exercise brought together officers in observer and umpire roles in a venue where they could discuss what they had seen.[326] The 7th Cavalry Brigade (Mechanized) and the Provisional Tank Brigade, a unit formed by grouping together infantry tank units, ran roughshod over the 1st Cavalry Division, a pure horse cavalry unit. At the conclusion of the exercise, Third Army commander Lieut. Gen. Stanley D. Embick suggested the War Department mechanize additional cavalry units and that horse cavalry be retained only for limited reconnaissance functions.[327]

At the conclusion of the exercise on 25 May, Chaffee met with Andrews and the senior infantry tank officers in the basement of the Alexandria High School in Alexandria, Louisiana. They deliberately did not invite Herr or the Chief of Infantry, both in the area at the time. The attendees reached the unanimous decision to push for a separate arm for mechanized units.[328] Chaffee followed up the basement meeting the next day with a letter to Andrews outlining his plans to create two armored divisions. He deliberately chose the term "armored" instead of "mechanized" or "tank" to get away from infantry and cavalry terminology and to bypass the wording of the National Defense Act of 1920.[329] Meanwhile, Andrews returned to Washington and briefed Marshall on the meeting. On 1 June, Andrews circulated a memorandum proposing the creation of an independent armored corps and scheduling a meeting for all the senior officers of concerned arms on 10 June. Andrews' memorandum laid out basic direction he favored, carving an independent armored force of out the infantry and cavalry's mechanized units. He warned Herr that the cavalry could expect to lose the mechanized cavalry brigade, the separate combat car

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[326]Alvan C. Gillem, Jr. to Timothy Nenninger, TDS, 27 Sep. 1967, Letter in the possession of Dr. Nenninger.
[327]Wilson, 215 and Blumenson, 1036-1037.
[328]Johnson, 349-350.
[329]Gillie, 164.

squadron at Fort Riley, and possibly the Corps Reconnaissance Regiments to the new force.[330]

Herr replied two days later with a single page of text. The brevity of his response, especially when compared to the Chief of Infantry's much longer reply, suggests Herr either did not take this threat seriously or had decided to write off the mechanized cavalry. He merely defended current policy as sound. A shortage of funds and not a lack of interest on the part of the cavalry had forestalled creation of a mechanized cavalry division. The Chief of Cavalry insisted that the Germans were using their panzer divisions in a cavalry role; any new American branch would be redundant. Finally, Herr again asked permission to expand the 7th Cavalry Brigade (Mechanized) to a division and sought additional resources to form four more similarly sized units.[331]

Events quickly overwhelmed Herr and the cavalry. On 5 June, Marshall had in hand Andrews' draft plan for the proposed Armored Force.[332] When he sought Chaffee and Scott's advice on the creation of a mechanized cavalry division two days later, Herr found they were already en route to Washington to plan join Andrews in laying out a new armored force. A furious Herr complained that he had not been informed of their summons.[333] Andrews convened another meeting with the representatives of all the arms present on 10 June, but its discussions were only a formality. Marshall already had reached the decision to separate mechanization from the cavalry and infantry. Andrews and the reformers convinced him that the policy of decentralized mechanization obstructed the expansion of mechanization. [334] On 10 July, the War Department officially announced the

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330Maj. Gen. Frank N. Andrews, to Chief of Cavalry, TDS, 1 Jun. 1940, File 322.02 Armored Corps, Box 8, RG 177.
331Maj. Gen. John K. Herr, to G-3, Sub: "Mechanization," TDS, 3 Jun. 1940, File 322.02 Armored Corps, Box 8, RG 177.
332Maj. Gen. Frank M. Andrews, Sub: "Mechanization," TD, 5 Jun. 1940, File 322.02 Armored Corps, Box 8, RG 177.
333Johnson, 353-355.
334Maj. Gen. Frank M. Andrews, Sub: "Mechanization," TD, 5 Jun. 1940, File 322.02 Armored Corps, Box 8, RG 177 and Johnson, 355.

creation of the Armored Force and the end to the cavalry's nine year experiment with mechanization.[335]

[335]Adjutant General to multiple recipients, Sub: "Organization of Armored Force," TDS, 10 Jul. 1940, File 322.02 Armored Corps, Box 8, RG 177.

CHAPTER 8.

FADING AWAY

There is nothing very new about "Blitzkrieg" tactics. It is the Cavalry idea worked out to a high degree.
Lieut. Col. Edwin O'Conner, 1940?[336]

As the progressives and reformers well knew, the loss of mechanization doomed the cavalry. While the arm would cling to life as a specialized force for reconnaissance and security, it forever had forfeited its place in the line of battle. By late 1940, the sun set on the American horse cavalry. Soldiers and civilians following the war in Europe found little further reason to consider horse cavalry a viable weapon. When Herr's term as Chief of Cavalry expired in 1942, the Chief of Staff did not fill the vacancy. The Army eventually formed two horse cavalry divisions, but only one fought overseas and it did so dismounted. The cost of transporting horses overseas and maintaining them within a fully motorized army simply became too high.[337] The cavalry's contribution to the war took different forms. Cavalry officers in all grades flocked into the Armored Force and distinguished themselves there. Patton was the most famous example of the cavalry officers who found glory commanding armored units in combat. Less well know examples included Creighton Abrams, Robert Grow, and Earnest Harmon. Others such as Lucian Truscott commanded infantry units with distinction during the war. Still others such as James H. Polk stayed within the cavalry, commanding the mechanized cavalry reconnaissance units that fought around the globe.

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[336]Lieut. Col. Edwin O'Conner "Cavalry and the Armored Force," TD, 1940?, File 322.02 Cavalry Organization, Bx8, RG177.

[337]Kent R. Greenfield, Robert R. Palmer and Bell I. Wiley, *The Army Ground Forces: The Organization of Ground Combat Troops, United* States Army in World War Two, (Washington, D.C.: Historical Division of the Department of the Army, 1947), 336.

At the end of the Second World War, Grow, now a major general commanding an armored division in Europe, attacked the prewar conservatives and reactionaries for causing the cavalry's fall from grace. He observed that the proponents of mechanization had fought

> against a stonewall of reaction firmly mounted on four legs covered with hair. Instead of making the utmost use of the horse in its limited modern role and as a transition link to a more modern mount, they developed an obstinate narrow-minded defensive attitude that set cavalrymen against cavalrymen through years of petty bickering until in desperation and faced with the task of fighting a gigantic war, the War Department was forced by necessity to relegate to cavalry the puny role of reconnaissance and turn over its magnificent traditions to a new and separate arm.[338]

Grow faulted the conservatives for their obsession with the horse. More forward-looking cavalrymen saw it as the arm of mobile combat power. As he viewed it, there had been a struggle within the cavalry pitting these two conceptions against each other. On one side, Grow saw those officers who "hung tenaciously to the dying hope that somehow, some way, the horse would prove indispensable to the army." On the other, he continued, stood the younger officers who "sought eagerly to find a replacement for the horse."[339]

In the 1920s and 1930s, the United States Cavalry confronted fundamental questions about its identity framed within the context of intense branch partisanship and severe manpower and budgetary constraints. While it took prudent steps to maintain as powerful and modern a body of horse cavalry as possible, an intense struggle for the soul of the institution raged. Conservative officers insisted cavalry was the arm that fought on horseback. Pro-mechanization reformers proclaimed mobile combat power and not the horse to be the essence of the arm. Extremists garnered most of the attention then and since, but most cavalrymen stood somewhere in between. These men had a progressive attitude toward their arm. They understood the declining military utility of their mounts and sensed the armored vehicle's ability to replace it.

Despite this generally supportive attitude, the fact remains the cavalry only made halting progress between the World Wars toward mechanization. The small American

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[338]Maj. Gen. Robert K. Grow, to Col. Edwin M. Sumner quoted in Maj. Gen. John K. Herr, (Ret.). to Grow, TLS, 7 Jun. 1945, Grow Papers.
[339]Grow, "The Ten Lean Year," 3.

mechanized cavalry program, and the assumptions upon which it was based, ensured that advocates of mechanization only slowly could build support for their reforms. Faster change called for exactly the kind of bold, visionary leadership the interwar Chiefs of Cavalry did not provide. Faced with the unenviable task of holding together an institution under attack from without and torn apart within, the chiefs sacrificed the cavalry's future on the altar of branch unity. With the creation of the Armored Force in July 1940, the United States Cavalry ceased to be the Army's arm of mobile combat power, becoming instead a monument to the failure of peacetime military innovation.

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