

INTRODUCTION

“Men on Iron Ponies, The Death and Rebirth of the Modern U. S. Cavalry,” examines the United States Army’s development of mechanized ground reconnaissance units between World War I and World War II. This process directly influenced the manner in which they were used and how well they performed during the Second World War in the Mediterranean and Western European theaters. The evolution of these unique units warrants study because of the complexity of the environment in which these developments took place and the impact they had on the Army, specifically Cavalry Branch, and its ability to render effective reconnaissance and security service during World War II. Today, the Army continues to be confronted with many of the same issues that were important to the development of mechanized ground reconnaissance units. What will the nature of the next war be? What kind of doctrine will lend itself to the anticipated future battlefield? What kind of organization will best fulfill the doctrinal objectives and what kind of equipment should that organization have? Today the Army has embarked on a transformation heading in another direction. Mobility, strategic and not tactical in today’s debate, is again taking precedence over firepower and protection.¹ For many of the interwar years, the likelihood of fighting in Europe seemed as remote as the notion of fighting a massive tank battle in the Fulda Gap today. Mexico, the Canal Zone and South America seemed like

¹ After the 1991 Gulf War, the Army reconfigured the 2^d Armored Cavalry Regiment from being a unit equipped with M1 main battle tanks and M3 cavalry fighting vehicles to a unit equipped with nothing but High Mobility Multipurpose Wheeled Vehicles (HMMWV). Scouts in heavy infantry and armor battalions have moved away from using armored tracked vehicles and are now using HMMWVs. The current fielding of the Stryker, a wheeled armored vehicle that comes in a variety of configurations, is the beginning of a move away from what the Army considers the Legacy Force (M1s, M2/M3 armored personnel carriers, and other conventional weapons in today’s organization) toward a more agile force built around the Future Combat System that is still in development. As an example, Secretary of Defense Donald Rumsfeld conducted a Pentagon town hall meeting about U. S. military transformation. He cited the continued need for U. S. forces to become “lighter and more agile.” American Forces Press

more probable theaters to the leaders in Cavalry Branch. Then, as today, budgetary concerns confronted the Army's leaders as they sought to carry out their daily missions with an eye to what could be expected of them in the future. Interwar cavalry leaders had little on their plates in contrast to today's leaders, but they also had a much smaller budget with which to work. And then, as now, leaders' willingness and ability to accept change directly influenced the development of new organizations built around emerging technologies.

New technology, specifically the airplane in World War I, supplanted the horse for certain long held strategic reconnaissance missions and forced Cavalry Branch to seek new solutions to maintain its ability to contribute to the Army's need for information derived from this mission. Machine guns and barbed wire had also called into question the continued relevance of horse cavalry, a combat arm in the American tradition never solely dedicated to reconnaissance. Tanks and armored cars, technologies that also emerged during World War I, seemed to offer some capabilities that might build upon and enhance the existing American cavalry.

Although neither tank nor armored car could ever go all the places a man on horseback could, a lack of tactical mobility that sustained the debate which pitted animal against machine into the 1950s, at the end of World War I they appeared to offer some means of fulfilling future cavalry missions on the modern battlefield. Developments in mechanized reconnaissance units took place in parallel within Cavalry Branch throughout most of the interwar years as it struggled to incorporate new technology to maintain its ability to perform its wartime missions.

In one case, Cavalry Branch developed specialized mechanized reconnaissance forces to serve other mechanized forces developed during the interwar years. These other mechanized forces sought to replicate the combat missions of the horse cavalry, especially offensive combat, exploitation and pursuit. Ultimately escaping Cavalry Branch in 1940 to become the Armored Force, these other forces were the progenitors of the modern armored divisions. When they departed Cavalry Branch, they took with them their own mechanized ground reconnaissance agencies. In the other case, Cavalry Branch developed mechanized reconnaissance forces to support the continued use of horse cavalry, the branch's premier combat element. As World War

Service, "Defense Secretary Talks Transformation," *Pointer View* (West Point, New York), 22 August 2003.

II erupted in Europe, Cavalry Branch developed a specialized hybrid horse-mechanized cavalry regiment to serve the reconnaissance and security needs of corps sized units as the United States Army underwent a rapid and massive expansion. Even so, Cavalry Branch remained primarily focused on the combat role to be played by its horse cavalry divisions.

All mechanized reconnaissance units that served in World War II descended from these interwar units and were imprinted by the debate that had gone into their development, organization, equipment and doctrine. Ironically, these all mechanized cavalry units largely defined the contribution of Cavalry Branch to the American war effort in Europe in a manner the branch never would have willingly chosen for itself, in theory acting solely as an agency of reconnaissance and security. After World War II, the men who had commanded these all mechanized cavalry units developed specifically for reconnaissance and security missions, serving armies, corps and divisions, considered them generally ineffective on these missions, but far more capable of carrying out the traditional combat missions of cavalry than they had been considered capable of before World War II.²

How could this have happened? Two full decades separated the world wars, yet America went into and fought World War II with ground reconnaissance agencies deemed less than satisfactory. This was a result of the competing interests that shaped the development of mechanized ground reconnaissance units and the viewpoints each, the Armored Force men and the horse cavalrymen, brought to the process. Each of the sides in the struggle that shaped mechanized ground reconnaissance doctrine, organization, and equipment had a more important priority than specialized reconnaissance units. For each side, the real issue was combat; reconnaissance was merely a means to that end. Common to both were the realities of the interwar depression environment that constrained practical development, but did not constrain the minds of all men involved in the process of preparing for the next war. Unfortunately, the prejudices held by those who sought to constrain mechanization, so as not to see it eclipse their beloved horse cavalry in the next war, directly contributed to the flawed doctrine and organization that characterized the World War II experience of mechanized cavalry units. Fortunately, the men who commanded these units drew on a doctrinal background that

emphasized combat. They were largely able to overcome the shortcomings of their organizations with creativity and the application of the doctrine they had been raised within the horse cavalry, which emphasized combat, rather than the doctrine developed specifically for mechanized ground reconnaissance units. The efforts of the men who served in mechanized cavalry units during World War II led directly to the reconciliation of Cavalry Branch with its Armored Force offspring and have contributed directly to the doctrine and design of contemporary cavalry units. Before the Army's and the nation's leadership completely abandons today's force for a future force, they would be well advised to consider the cost of arriving at today's solutions. Two decades of peace dividends did not result in the proper solution for how to conduct ground reconnaissance. The nature of World War II did not completely match interwar expectations. High hopes for technology were dashed, as they had been in the past, by the reality that war remains a human endeavor, a contest between competing wills. A contest which for them inevitably meant closing with the enemy to determine his intentions. A contest that required them to fight for information, regardless of the equipment on hand.

The very term "cavalry" can easily lead to confusion, thus it is important to establish a doctrinal understanding of the subject. Well into World War II, the June 1944 edition of *FM 100-5, Field Service Regulations, Operations* still recognized two forms of cavalry: horse cavalry and mechanized cavalry.³ Cavalry, in total, was "characterized by a high degree of battlefield mobility" and derived its "special value" from its ability to rapidly move firepower from "one position or locality to another."⁴ Doctrinally, *horse cavalry* retained all of its traditional combat functions including offensive and defensive combat as well as the missions

² U. S. Forces, European Theater, The General Board, *Mechanized Cavalry Units, No. 49*, (Washington: Government Printing Office, [May 1946]). Hereafter cited as *The General Board, Report 49*.

³ War Department. *FM 100-5, Field Service Regulations, Operations* (Washington: War Department, 1944), p. 8. I have purposely used the 1944 edition of *FM 100-5*, the Army's principal statement on doctrine, because it demonstrates the continued belief that horse cavalry was a combat arm. This had been the view coming out of World War I and all the way through the interwar years. It should also be noted that Cavalry Branch anticipated that the majority of its combat would take place dismounted, though the doctrine continued to address mounted attacks at the squadron level and below.

⁴ *Ibid.*

more commonly associated with cavalry, reconnaissance and counterreconnaissance. The same 1944 doctrine characterized *mechanized cavalry*'s mission as conducting "reconnaissance missions employing infiltration tactics, fire and maneuver."⁵ The Army defined reconnaissance as "the directed effort in the field to gather information of the enemy, terrain, or resources" and its purpose was to "gain the information upon which to base tactical or strategical operations."⁶ Reconnaissance had always been an important function of cavalry, but as a branch, throughout the interwar years and well into World War II, Cavalry Branch continued to doctrinally define itself as a branch capable of performing offensive and defensive combat missions with its horsed elements. Mechanized elements remained doctrinally limited to the mission of reconnaissance. Why then had the branch broken with its past traditions of homogeneity of force composition to develop a subordinate arm for an important, but narrow function?

At the end of World War I, General John J. Pershing conducted an extensive staff study of the Great War which culminated in the American Expeditionary Force (AEF) Superior Board Report. Although few American cavalry units saw service in Europe, a board of cavalry officers contributed to the Superior Board Report.⁷ They concluded that the role of cavalry had "changed but little when considering a war of movement," but "that the aeroplane will do the major part of what was formerly believed to be the role of cavalry in its strategic nature, so far as very distant reconnaissance is concerned."⁸ The board was impressed with another piece of technology, the armored car which the French used for reconnaissance on roads, pursuit, delaying actions, and for helping to overcome "machine gun resistance."⁹ They were so impressed that they recommended the inclusion of twelve of these cars in the horse cavalry division.¹⁰

⁵ Ibid.

⁶ Ibid., p. 51.

⁷ Cavalry Board to Adjutant General, General Headquarters American Expeditionary Forces, 24 April 1919, General Headquarters A.E.F. folder, box 13, entry 39, RG 177, NAI. The board was appointed by Special Order 44.

⁸ Ibid., p. 27.

⁹ Ibid., p. 31.

¹⁰ Ibid.

By the early 1920s doctrinal literature began to reflect the Cavalry Branch's new role in regard to reconnaissance. There was no question that the airplane now carried the bulk of what they defined as *strategic reconnaissance*, but because of weather conditions and inability to cover terrain in detail, the Army still considered there to be a reconnaissance role for the cavalry in the gap between opposing armies.¹¹ Into this gap the Army anticipated the employment of an entire horse cavalry division.¹² To help the cavalry division extended its range into this gap, Cavalry Branch as well as other branches began the introduction of motorization and mechanization.¹³ Motorization focused almost exclusively on the logistics support of horse cavalry units. Mechanization took on ever greater roles in the arena of "distant" reconnaissance, with the emphasis on saving "horseflesh." Still, the horse's all-terrain, all-weather mobility had been and remained the central pillar of the argument for retaining horse units. As the mechanical reliability of the vehicles increased a different question began to emerge: How would the horse and the mechanized vehicle work together to accomplish Cavalry Branch's mission? The Army also sought the answer to the question of whether or not the cavalry mission could be completely performed without the horse.

In 1931, Chief of Staff of the Army Douglas MacArthur made an important decision about how the Army would experiment and develop mechanization. He authorized all branches to develop and implement mechanization and motorization as they saw fit. No longer was Infantry Branch solely entitled to experimentation with tanks. This paved the way for Cavalry Branch to experiment and led to the parallel development of mechanized reconnaissance units

¹¹ The General Service School, *Tactics, and Techniques of Cavalry* (Fort Leavenworth, Kansas: The General Service School Press, 1921), pp. 18-19.

¹² *Ibid.*, p. 19.

¹³ Mildred Hanson Gillie, *Forging the Thunderbolt, A History of the Development of the Armored Force* (The Military Service Publishing Company: Harrisburg, Pennsylvania, 1947), p. 115. Gillie's definitions are the same as those used in *The Cavalry Journal* throughout the interwar years. Mechanization is defined as the application of mechanics directly to the combat soldier on the battlefield. Motorization is defined as the substitution of motor-propelled vehicles for animal drawn vehicles or pack animals in the supply echelons of all branches of the Army. Using these definitions, all reconnaissance units regardless of being mounted on wheeled or tracked, armored or unarmored vehicles will be referred to as "mechanized."

during the interwar years since the all-mechanized forces envisioned under MacArthur's directive also needed an agency of reconnaissance. This resulted in the establishment of the first permanent all mechanized force. The 1st Cavalry Regiment (Mechanized) was equipped with a variety of vehicles including the "combat car," another way of saying "tank" to allow Cavalry Branch to circumvent existing federal statutes that reserved tank experimentation to Infantry Branch.¹⁴ Shortly thereafter, the cavalry's mechanized force expanded into the 7th Cavalry Brigade.

The 7th Cavalry Brigade presented a serious possibility for confusion in the study of the development of mechanized ground reconnaissance between the world wars and during World War II because of the nomenclature associated with its subordinate components, the 1st and 13th Cavalry Regiments. These were fully mechanized cavalry regiments that sought to replicate all cavalry missions, including combat. To this end, they were organized with all arms, especially tanks. In 1940, the 7th Cavalry Brigade became the 1st Armored Division and left Cavalry Branch to become part of the Armored Force. The development and evolution of this organization, which led directly to the American armored division, has been well documented and researched, but must be traced in outline to show the evolution of the reconnaissance units that served it. The mechanized cavalry units that saw service in World War II were not descended from the mechanized cavalry regiments that gave rise to the armored divisions. Rather, they grew out of the specialized units developed solely for reconnaissance, not the full scope of combat missions.

The perception of what kind of war Cavalry Branch might be called upon to fight in the future also influenced the integration of mechanization. The findings of the cavalrymen in their report to the Superior Board predicated their conclusions on how they expected their branch to be used in a "War of Movement," since a return to trench warfare would also see a return of

¹⁴ Lieutenant General John L. Ryan (Ret.) to Timothy Nenninger, 15 June 1967, Indian Harbor, Florida. The term "combat car" was used to avoid violating the federal law that limited experimentation and developments in tanks to the purview of Infantry Branch. "Combat Car" will be used throughout the remainder of the text but the reader should envision a tracked vehicle more commonly referred to as the tank even though there were some differences in the machines used by the cavalry and the infantry.

cavalrymen to the role of infantrymen, thus requiring no special modifications to training, doctrine, or organization of the branch.¹⁵ The tales of Allied uses of horse cavalry and the endurance of their horses sustained an entire generation of American cavalrymen and reaffirmed their confidence in their relevance as a wholly modern combat arm. Lord Edmund Allenby's exploits in the deserts of the Middle East were easily transferred in the minds of American horse soldiers to their own remote, desolate theater of operations, the Mexican border.

With peace in Europe, America quickly withdrew behind the Atlantic. The citizens of the United States sought "normalcy," which meant thinking about the Army little and spending even less.¹⁶ The realm of probable action in the United States, Central and South America and colonial holdings in the Philippines suggested a viable role for horse mounted warriors. This was another important and complex factor that must be examined in the overall development of the mechanized reconnaissance forces of the United States Army. After World War II, it was all too easy to criticize those key leaders who resisted the trend toward mechanization in favor of retaining what they viewed as proven technology, the horse. The American political landscape upon which the debate and development of mechanized reconnaissance forces were built did not suggest that the United States would return to Europe to fight in another war.

The Great Depression had minimal impact on the Army as a whole, since as an institution it was already in terrible condition, starving financially since the 1920s.¹⁷ The Army's leadership was still thinking in terms of World War I manpower and rifle strength, and as Thomas Collier points out, what the Army really lacked was vision not money.¹⁸ Fortunately for the Army and the nation as a whole, the 15% reduction in military pay that President Franklin D. Roosevelt instituted with his New Deal had little impact on officer and enlisted retention and

¹⁵ Cavalry Board Report, April 1919, p. 27.

¹⁶ Thomas W. Collier, "The Army and the Great Depression," *Parameters* (September 1988), p. 102.

¹⁷ *Ibid.*, pp. 102-103.

¹⁸ *Ibid.*, p. 103, 108 and Robert K. Griffith, Jr., *Men Wanted for the U. S. Army, America's Experience with an All-Volunteer Army Between the World Wars* (Greenwood Press: Westport, Connecticut, 1982), p. 164. Applications for service during 1934 and 1935 exceeded openings at a ratio of 2:1. By 1937 the ration had only dropped to 1.23:1.

desertion.¹⁹ The Army may have lacked vision at its highest levels as Collier suggests, but enough men with vision persevered and developed mechanized reconnaissance tactics, doctrine and equipment in conjunction with the same process that resulted in the formation of armored divisions in 1940. Even with their vision, innovation and creativity, it was hard to ignore the economic constraints of the Great Depression and its retarding impact on the growth of mechanized reconnaissance. Throughout the Depression the Ordnance Corps had a minimal share of the Army's overall budget to invest in new equipment. From 1922 until 1935 its allotment consisted of a mere 3.5% of the overall Army budget in stark contrast to the 25% share the Corps enjoyed in 1939.²⁰ This lends context to the firm belief of those involved in the pioneering process of the early 1930s that they had the right ideas but were not able to see them executed on the proper scale. General Robert W. Grow, one of the mechanization pioneers at Fort Knox, said it best, remarking, "Under Hitler they were in a position to act while we were denied funds to more than improvise and experiment."²¹

As the likelihood of a renewed war in Europe grew so did the backdrop that shaped the issues of mechanized reconnaissance. As Hitler's military arm spilled over the restraints of Versailles, Americans were forced to take notice. Even though the process of mechanization had started out as a "homegrown" idea it could no longer resist the influence of the events abroad. At the end of the interwar period, and on the eve of American involvement in the new European war, the means of conducting ground reconnaissance were transformed. The debate over cavalry's role changed again and gathered steam as Europe moved toward and became embroiled in war. Hitler's *panzers* lent new urgency to questions about the organization of the United States Army. Cavalry Branch suffered a major blow when the 7th Cavalry Brigade

¹⁹ Ibid., p. 106.

²⁰ Ibid., p. 104.

²¹ Lieutenant General Robert W. Grow (Ret.) to Timothy Nenninger, 10 June 1967, Falls Church, Virginia, Grow's remarks were offered in the context of his recounting the visit paid to Fort Knox by the German General Staff in 1933. He was confident that it was the Germans that had learned from the Americans. Grow commanded the 6th Armored Division in France and Germany during World War II.

(Mechanized) was taken away from it and given its own home in the Ist Armored Corps in June 1940 before the massive expansion of the peacetime Army.

Cavalry did its best to maintain its niche as a combat force on a par with the infantry with its cavalry divisions, but also placed increased emphasis on its ability to serve corps sized units with “corps reconnaissance regiments” built with horse and mechanized elements. Throughout cavalry branch’s quest to maintain relevance for the coming war, there was a burning desire to retain a role for the horse and the mounted man. This last effort played up the horse’s unique capability to perform reconnaissance better than any mechanized trooper. This last effort to secure the horse’s future took place during the 1941 General Headquarters Maneuvers. Only weeks after the completion of these maneuvers, the nation was at war and the games were over. In 1942 Army Ground Forces eliminated all horses from the horse and mechanized corps cavalry regiments.²² Even so, mechanized ground reconnaissance units continued to evolve and proponents of the horses continued to campaign for its restoration to fighting and reconnaissance units.

The United States entered World War II with a completely mechanized ground reconnaissance force. The 1st Cavalry Division went on to fight in the Pacific without its horses, serving as an infantry division.²³ This meant that as the Cavalry Branch grew from 13,000 troopers in 1940 to its peak strength of 91,948 in 1945, the vast majority of its men served in seventy-three mechanized ground reconnaissance units.²⁴ This also should have meant that the Cavalry Branch’s contribution to the war effort largely consisted of reconnaissance and security missions, yet it did not. A board of officers who had commanded mechanized cavalry groups, squadrons, and troops concluded that in total their units had rarely conducted purely

²² *Table of Organization No. 2-25, Cavalry Squadron, Mechanized* (Washington: U. S. Government Printing Office, 1 April 1942).

²³ Mary Lee Stubbs and Stanley Russell Connor, *Army Lineage Series, Armor-Cavalry, Part I: Regular Army and Reserve* (Washington: Office of the Chief of Military History, 1969), p. 71.

²⁴ *Ibid.*, p. 73.

reconnaissance missions. Rather, they concluded, their units performed all of the traditional cavalry missions despite their doctrine and organization.²⁵

There is no shortage of scholarly research pertaining to military developments during the interwar years. Furthermore, the body of work on the development of what would become the Armored Force and the tank divisions, which it encompassed, is extensive. Beginning with Dr. Dale Wilson's *Treat'em Rough* which traces the evolution, training and employment of the first American armored forces during World War I, the American experience with tanks and the ideas and equipment from abroad which shaped this experience, especially in World War I, is well researched.²⁶ Dr. Mildred Gillie's *Forging the Thunder Bolt* was the first serious examination of General Adna Chaffee's, and others, contribution to the development of modern armored doctrine and organizations between the death of the first American tank force, where Wilson leaves off, and the beginning of World War II.²⁷ Dr. Timothy Nenninger's master's thesis, "The Development of American Armor, 1917-1940," provided a broader view than Gillie on the development of the Armored Force, but focused little on the specific issue of mechanized reconnaissance.²⁸ Dr. Robert Cameron's dissertation, "Americanization of the Tank: U. S. Army Administration and Mechanized Development Within the Army, 1917-1943," is an extensive examination of how events abroad during the interwar years shaped the development of the Armored Force, but more importantly, it is an in-depth view of how the War Department bureaucracy had a direct impact on the emergence of new ideas, weapons, and organizations associated with the evolving Armored Force.²⁹ Although Cameron's work goes into some detail

²⁵ The General Board, *Report 49*, pp. 7-8.

²⁶ Dale E. Wilson, *Treat'Em Rough!: The Birth of American Armor, 1917-1920* (Novato, California: Presidio, 1989).

²⁷ Mildred Hanson Gillie, *Forging the Thunderbolt: A History of the Development of the Armored Force* (Harrisburg, Pennsylvania: Military Service, 1947).

²⁸ Timothy K. Nenninger, "The Development of American Armor, 1917-1940" (master's thesis, University of Wisconsin, 1968).

²⁹ Robert S. Cameron, "Americanization of the Tank: U. S. Army Administration and Mechanized Development Within the Army, 1917-1943" (Ph.D. dissertation, Temple University, 1994).

about the evolution of mechanized reconnaissance concepts, his dissertation, like Gillie's book and Nenninger's thesis, does not focus on this issue solely, nor does he follow the Armored Force through its employment in World War II. Dr. David Johnson's book, *Fast Tanks and Heavy Bombers* is extremely critical of the intellectual shortsightedness of the Army during the interwar years in regard to developing the sound doctrine and equipment for World War II.³⁰ He too focuses on Cavalry Branch, but not specifically on the issue of how mechanized reconnaissance evolved and what impact it had on the larger issue of the development of the Armored Force.

Charles M. Bailey's *Faint Praise, American Tanks and Tank Destroyers during World War II* focuses on the development of the M4 Sherman tank and its shortcomings.³¹ He uses doctrine, personality, military intelligence, and technology to explain the outcome. His conclusion that American soldiers were happy with the M4 well into World War II because they did not realize how inferior it was until 1944 during their first encounter with massed German armor addresses the notion of unfulfilled prewar expectations. Just as mechanized ground reconnaissance units were never expected to perform many of the tasks they ultimately carried out during World War II, tanks were never intended to destroy tanks since that was the role of tank destroyer units. Tanks had been designed for exploitation, not fighting other tanks. Although Bailey's work focuses solely on tanks and tank destroyers, it may serve as an interesting point of reference to help explain the wartime performance of other American units organized and equipped concurrently with the changes taking place in Cavalry Branch.

Vincent J. Tedesco's excellent master's thesis, "'Greasy Automatons' and the 'Horse Set': The U. S. Cavalry and Mechanization, 1928-1940," captures the intellectual struggle within the cavalry community as it integrated machines. Tedesco's work, to some extent, covers the evolution of mechanized reconnaissance between the wars inasmuch as he uses it as an issue to expose the intellectual leanings of the members of Cavalry Branch at more than just the

³⁰ David E. Johnson, *Fast Tanks, Heavy Bombers: Innovation in the U. S. Army, 1917-1945* (Ithaca, New York: Cornell University Press, 1998).

³¹ Charles M. Bailey, *Faint Praise, American Tanks and Tank Destroyers during World War II* (Hamden, Connecticut: Archon Books, 1983), p. 11.

highest levels of leadership. Like the other works, Tedesco also ends his study with the beginning of World War II.³² Two other masters theses have been written that address the performance of mechanized reconnaissance units during World War II. Louis A. DiMarco's thesis, "The U. S. Army's Mechanized Cavalry Doctrine in WWII," places a heavy emphasis on examining the mechanized cavalry doctrine as it existed during World War II and to a lesser extent, how it evolved.³³ DiMarco concludes, just as the General Board concluded at the end of the war, that mechanized cavalry units were rarely employed in their doctrinal role, doing reconnaissance. DiMarco, I believe, influenced by his contemporary experiences with armored cavalry units that are descended from and have benefitted from their World War II predecessors' experiences, concludes that this was acceptable since mechanized cavalry units, ranging from troops assigned to infantry divisions all the way up to cavalry groups serving armies and corps, performed their assigned tasks while largely ignoring the greater question: How did the mismatch of doctrine and employment develop?

The other master's thesis, "Doctrine, Organization, and Employment of the 4th Cavalry Group During World War II," by John N. Tully, is much like DiMarco's in that it places its emphasis on the actual conduct of combat operations during World War II.³⁴ Tully, better than DiMarco, recognized the disconnect between the doctrine brought to Europe by the largest reconnaissance units, the cavalry group, and the missions it was asked to conduct. Tully follows a single unit, the 4th Cavalry Group, which saw extensive action, but only from June 1944 until May 1945. Although there are a number of masters theses directly related to mechanized

³² Vincent J. Tedesco, III, "'Greasy Automotons' and the Horsey Set": The U. S. Cavalry and Mechanization, 1928-1940." Masters thesis, The Pennsylvania State University, 1995.

³³ Louis A. DiMarco, "The U. S. Army's Mechanized Cavalry Doctrine in WWII" (Master's thesis, U. S. Army Command and General Staff College, Fort Leavenworth, Kansas). DiMarco's thesis continues to breed confusion about the events shaping the doctrine and organization of ground reconnaissance units in World War II. Andrew L. Bartecky's recent article, "The Stryker-Equipped Cavalry Squadron in an Urban Environment," *Armor* (July-August 2003), cited DiMarco's thesis to attribute a greater degree of transformation of reconnaissance doctrine and organization than really took place during World War II.

³⁴ John N. Tully, "Doctrine, Organization, and Employment of the 4th Cavalry Group During World War II" (Masters thesis, Command and General Staff College, Fort Leavenworth, Kansas, 1994).

reconnaissance, like the books and scholarly work prepared on the development of the Armored Force, none links the interwar experience to the wartime performance and continued evolution of ideas, equipment, and doctrine related to mechanized reconnaissance.

This work stands alone in describing not only the development of the specialized mechanized ground reconnaissance units that provided the basis of today's mechanized cavalry units, but follows them through World War II as the first to serve in the reborn United States Cavalry. The horses were no more after 1942, but the men on iron ponies kept alive traditions reaching back to the American Revolution. When World War II ended, they emerged as the leaders calling for reconciliation with the former members of Cavalry Branch who had fought with the Armored Force. They did so in the finest traditions of the men who had led the interwar effort to master new tasks with emerging technology. They did so with an eye to the future while acknowledging their roots in the past.