

## CHAPTER 1

### THE LESSONS OF WORLD WAR I, REALIZATION TO IMPLEMENTATION

They will disband their armies,  
When this great strife is won,  
And trust again to pacifists,  
To guard for them their home.

They will return to futility,  
As quickly as before,  
Though Trust and History vainly shout,  
“THERE IS NO END TO WAR”.<sup>1</sup>  
—George S. Patton, Jr.

The next war will begin as the last war ended...WITH MOVEMENT!<sup>2</sup>  
—Marshal Ferdinand Foch

During the opening days of World War I the Russian army honored its commitment to France and thrust two massive armies into East Prussia. General Maximilian von Prittwitz commanded the German Eighth Army and nearly panicked when faced with the onslaught of forces from the east. Prittwitz's task was to hold in the east while the bulk of the German army sought decisive victory in the west using the vaunted Schlieffen Plan. His panic resulted in his

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<sup>1</sup> George S. Patton, Jr., “The End of War,” Selected Poems: 1916-1925, Papers of George S. Patton, Jr., United States Military Academy, hereafter cited as Patton Papers, USMA. Patton wrote this poem on 30 December 1917.

<sup>2</sup> *Cavalry Combat* (Harrisburg, Pennsylvania: Telegraph Press, 1937), p. 507.

relief from command and the appointment of Generals Paul von Hindenburg and Erich Ludendorff to steady the situation. By the end of August this famous partnership directed the massive German victory that erased the Teutonic failure of 1410 and restored German glory to the name Tannenberg. In the orgy of violence and death one scene in particular haunted a German officer the rest of his life. More than the thrashing sounds of thousands of Russian soldiers who drowned in the many lakes that dotted the landscape, it was the image of white horses that gnawed at his soul. Five hundred men mounted on five hundred white horses stood silent and dead in the image forever burned in his mind. The horses and riders were packed in a formation so tight they remained transfixed unable to fall where the modern means of war and death found them.<sup>3</sup> If such a tragedy could befall mounted men in such gruesome fashion on this the front heralded as the one of maneuver in contrast to the static Western front of putrid trenches, what then was the future of cavalry?

Even tragedies such as this visited on others did not deter the belief that there was still a definite future for the horse on the modern battlefield and that the role of the cavalryman was secure. These conclusions were clearly spelled out in the findings of the American Expeditionary Force Cavalry Board. Within ten years of the armistice American cavalry, still reliant and committed to the horse, started to entertain the notion that other participants on the battlefields of World War I might also be of use and experimentation began. By 1934 the first clash of mechanized and horse cavalry occurred on the plains of Fort Riley, Kansas, marking the beginning of a new era in the United States cavalry force. The roots for these changes, and in some cases later resistance to these changes, were found in the First World War.

The United States entered World War I with seventeen regiments of cavalry. The nation elected to leave the majority of these units on the Mexican border.<sup>4</sup> There was a genuine fear that the country was filled with German agents and that the Mexicans would be all too willing to

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<sup>3</sup> Alan Clark, *Suicide of Empires, The Battles of the Eastern Front* (New York: American Heritage Press, 1971), p. 44.

<sup>4</sup> Johnson, *Fast Tanks, Heavy Bombers*, p. 27. A total of nine cavalry regiments were committed to the border with Mexico, perhaps as a precautionary measure after the Zimmerman Telegram.

“unite against the hated *gringos*.”<sup>5</sup> The very austere nature of the border region, lacking in infrastructure for communication and transportation, demanded the employment of large mounted formations. This need did not disappear during the interwar years.<sup>6</sup> Only the 2<sup>d</sup> Cavalry Regiment saw any service in Europe during World War I.<sup>7</sup>

Captain Ernest Nason Harmon gathered a small collection of horses from remount stations and veterinary hospitals. The composition of his force was somewhat varied, including large Percheron draft horses and even a Spanish pony. Forty-two of the conscripted mounts were white or gray, making them particularly susceptible to hostile fire. The small force was used for courier duty, some reconnaissance, and on one occasion Captain Harmon garnered a better mount for himself from a German staff officer while in pursuit of a broken force.<sup>8</sup> Harmon’s small mounted force reduced a German machine gun in the Argonne sector using a mounted charge to close with and destroy the enemy position that had delayed the advance of an American infantry attack. There were no casualties in the charging force, a lesson not forgotten by interwar proponents of retaining the horse for all forms of cavalry service.<sup>9</sup> Although this was an isolated event, it did give hope to many that under the right circumstances the horse could still compete against the machine gun by closing the distance between their respective start

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<sup>5</sup> John K. Herr and Edward S. Wallace, *The Story of the U.S. Cavalry, 1775-1942* (New York: Bonanza Books, 1953), pp. 241-243. The Zimmerman Telegram reinforced the notion that there might be trouble on the Mexican border.

<sup>6</sup> Allen Millet and Peter Maslowski, *For the Common Defense: A Military History of the United States of America* (New York: The Free Press, 1984), p. 399.

<sup>7</sup> Herr, *The Story of the U.S. Cavalry, 1775-1942*, p. 243 and *Cavalry Combat*, p. 73. Prior to the St. Mihiel offensive, the men of the 2<sup>d</sup> Cavalry Regiment were performing construction.

<sup>8</sup> *Ibid.*, p. 243.

<sup>9</sup> Wesley W. Yale, Isaac D. White, and Hasso E. von Manteufel, *Alternative to Armageddon, The Peace Potential of Lightning War* (New Brunswick, New Jersey: Rutgers University Press, 1970), pp. 114-115. Captain Harmon would go on to command the 2<sup>d</sup> Armored Division during World War II. The Chief of Staff of the American division that enlisted the services of Captain Harmon to charge the German machine gun was General Hawkins, also known as “Mr. Cavalry.” Hawkins was a regular contributor to *The Cavalry Journal* and was clearly identified as one of those who saw continued relevance for the horse in the future of the cavalry branch.

points before the machine gunner could engage the mounted man. The theme of proper tactical deployment and dispersion in conjunction with the proper use of terrain continued to appear in the arguments of those in favor of retaining the horse for combat and reconnaissance roles during the interwar years.



Figure 1

Captain Ernest N. Harmon , June 1919 aboard the *USS Rijndam* returning to the United States. Harmon was one of the few cavalymen to see service during World War I as a horse mounted cavalryman. Harmon Papers, Special Collections, Norwich University.

The United States Army remained in Europe from the conclusion of the Armistice in November 1918 until 1923. Most of this time was spent occupying the Coblenz bridgehead near the confluence of the Rhine and Moselle Rivers. While there the Army did more than just demobilize, it also gave serious thought to the laws regulating its organization and composition and how these factors might affect its ability to respond to future threats.<sup>10</sup> To accomplish this task, General John J. Pershing established a series of boards to consider the American experience during World War I. He also convened a Superior Board to review the findings of the subordinate boards. Although the primary objective of the Superior Board was to draw conclusions about the performance of the World War I square infantry division, it did comment on the future of cavalry.<sup>11</sup>

The American cavalymen deployed in Europe took advantage of their unique opportunity to investigate and learn from the other Allied cavalry forces' experiences during the war. General John Pershing, who as late as 1916 led the force that chased the Mexican bandit Pancho Villa, directed that a board of officers investigate and report on the "Armament, Organization, the role of Cavalry and Cavalry tactics."<sup>12</sup> The board, composed of two colonels and one brigadier general, traveled from France to England, Italy and Belgium. They directed their attention to the current organization of the forces in those countries, gathered information on the operations the respective forces had carried out during the war and asked the leaders of those forces what they thought had attributed to their success or failure in those operations. The board also expressed an interest in finding out how those armies planned to equip their forces in the future.

The overall content of the report focused on the traditional roles of cavalry as a combat force, but key observations within its pages held the seeds of future changes to the composition of the U.S. cavalry. The section on armaments covered everything from sabers to artillery. It

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<sup>10</sup> John B. Wilson. *Maneuver and Firepower, The Evolution of Divisions and Separate Brigades* (Washington: Center of Military History, 1998), p. 79.

<sup>11</sup> *Ibid.*, p. 83, 85.

<sup>12</sup> 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.

concluded that the “three inch gun” or 75mm had performed satisfactorily and should be retained.<sup>13</sup> The board debated the number of machine guns to be attached at every level from the division to the troop, but did not question that the machine gun would remain a permanent fixture on the modern battlefield and that the cavalry must embrace it. The report offered only a few comments about the number of automatic rifles, a relative newcomer to the recent war, which should be distributed in cavalry units. Again the board’s attention focused on matters more pertinent to combat than on means specific to the facilitation of reconnaissance

The board considered the addition of light armored cars carrying 37mm or 47mm as desirable, but did not see them as an integral part of the cavalry division.<sup>14</sup> The officers were drawn to the decisive campaign conducted by General E. H. H. Allenby in Palestine and Syria where mounted troops inflicted massive losses on a crumbling Turkish army. In the description of the campaign, the use of armored cars with the mobile Arab column operating east of Amman earned but a single sentence.<sup>15</sup> The board’s visit to the French 5<sup>th</sup> Cavalry Division at Vincennes exposed them to what the commander there thought the cavalry of the future would be, the armored car. There were eighteen cars on hand, each carrying a 37mm cannon and machine gun in a rotating turret. The British did not favor the further development of the armored car. Instead they saw more potential in the development of a light tank to accompany the cavalry.<sup>16</sup> The Belgian Cavalry Division at Cleves also contained armored cars, which received positive reviews from the officers who had used them. The Belgians, like the French, felt there was a real role for armored cars in the cavalry division.<sup>17</sup>

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<sup>13</sup> Ibid., p. 2.

<sup>14</sup> Ibid., pp. 3-4.

<sup>15</sup> Ibid., p. 11. A more graphic account of this operation might be seen in the movie, “Lawrence of Arabia.”

<sup>16</sup> Ibid., p. 20.

<sup>17</sup> Ibid., pp. 21-22. On the same day the board visited the Belgian Cavalry Division they were given a demonstration of an inflatable bridging system capable of carrying up to  $\frac{3}{4}$  of a ton. Although this was not capable of carrying an armored car it did show a degree of ingenuity allowing them to rapidly cross canals and small rivers in a minimal amount of time.

In their concluding remarks the board indicated that they were most impressed with the French version of the armored car. They saw merit in its ability to project firepower across a front of nearly a mile, conduct reconnaissance operations on roads, assist in delays and pursuits, and facilitate the reduction of machine gun resistance. The issue of mobility gave them their greatest concern and they were keenly aware of where such vehicles would have to operate in the United States. They pinned higher hopes on the continued development of the light tank as tractor technology increased. The board did see a place, even if not integral, for up to twelve armored cars in each cavalry division.<sup>18</sup>

Even though two thirds of the officers questioned about the retention of the saber replied that it should be discarded, the board chose to retain it for psychological and practical reasons stating that saber was to the mounted man held in the same esteem as the bayonet to the infantryman.<sup>19</sup> The British left the war with the same opinion for entirely different reasons. They felt the saber superior to the pistol in mounted action. They elected to retain the lance seeing themselves as an arm with a world wide mission and felt that it would be beneficial “especially against half-civilized people.”<sup>20</sup> In the defeated German army, junior officers were unable to do away with the “picturesque but useless” lance until 1927 against the wishes of tradition bound colonels.<sup>21</sup>

Equipment recommended for addition to the cavalry division included a squadron of airplanes, motorcycles, and pack radios. The airplanes were viewed important enough for addition, but not seen as “an integral part of the organization.”<sup>22</sup> It was unclear why the board responded in this manner, but Marshal Joseph Joffre made it perfectly clear that, “As to scouting,

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<sup>18</sup> Ibid., p. 31.

<sup>19</sup> Ibid., p. 2, 32.

<sup>20</sup> Ibid., p. 19.

<sup>21</sup> James S. Corum, *The Roots of Blitzkrieg, Hans von Seeckt and German Military Reform* (Lawrence, Kansas: University Press of Kansas, 1992), pp. 71-72.

<sup>22</sup> 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., p. 4.

he [Marshal Joffre] expressed the opinion that cavalry masses could no longer reasonably be expected to achieve results in the service of strategic exploration, that the aeroplanes will have to be depended upon largely for this duty.” He went on to concede that local and tactical security were still important missions for the cavalry.<sup>23</sup> The American view of this problem centered on the belief that “aeroplanes are met by aeroplanes, requiring them to keep very high and preventing any close reconnaissance of troops on the ground.”<sup>24</sup> Even so, the board saw the need to practice more night marches and to scatter their formations in an effort to conceal them from observation.<sup>25</sup> The issue of night operations continued to gain greater importance in the debate over what the best means of accomplishing reconnaissance would be in the future.

The officers of the cavalry board unanimously concluded that there was an important role for motorcycles in cavalry operations. These machines were expected to operate to the rear of the screen line and serve as a substitute for telephones and horse mounted messengers. The rationale was an extremely important one for the continued expansion of motorization within the cavalry arm and served as a recurring theme.<sup>26</sup> The thought was that by mounting men on motorcycles the division would be able to save “horse flesh.”<sup>27</sup> The board also recommended the addition of radios that could be packed on animals with ranges of up to fifty miles and could be placed into operation in three to five minutes. The proposed distribution for these pack radios foresaw: 1 set in each brigade, 5 sets in each regiment with one set per squadron, one for the

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<sup>23</sup> Ibid., p. 18. Marshal Joffre comments were based on the French cavalry corps inability to successfully complete a traditional strategic reconnaissance mission in Belgium in August 1914 because they were unable to break through.

<sup>24</sup> Ibid., p. 5.

<sup>25</sup> Ibid., p. 6.

<sup>26</sup> The distinction of “motorization” is clear since there was no expectation that the man mounted on the motorcycle would operate at the front actively engaged in reconnaissance or other cavalry missions, rather his sole purpose was to assist with command and control.

<sup>27</sup> 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, National Archives II., p. 4.

regimental headquarters and two for detached units.<sup>28</sup> There was no mention of mounting radios in cars at this time.

Commenting on the supporting role that cavalry was expected to perform for the infantry divisions, the board of cavalry officers saw the need for one squadron or one regiment per division. They were non-committal as to whether or not the cavalry unit assigned to the division should be organic, but it seemed that they were more in favor of temporary attachments, thereby retaining the ability to form these squadrons or regiments into divisions and corps.<sup>29</sup> The board did not fail to admit that on the Western Front cavalry troops had often been dismounted and were required to fight in the trenches as infantry, but they concentrated on those operations that they felt the cavalry had the most to offer, the most important being the pursuit. They did recommend the discontinuation of the mounted attack in close order and called for additional dismounted training for those times the cavalry was expected to fight like infantrymen.<sup>30</sup>

The board concluded that the strategic role of cavalry had changed the most and that the airplane would take over the majority of those tasks formerly assigned to the cavalry that pertained to strategic reconnaissance.<sup>31</sup> They did not recognize the possibility that they might regain a share of this mission using mechanized vehicles. The board clearly recognized the dichotomy that had faced the cavalry since the beginning of the mounted arm. Couched in modern terms that stated, “No organization can have at the same time a maximum development of fire power and maximum of mobility.”<sup>32</sup> Even though the armored cars had in some instances gained their attention, they did not view them as a means to help solve this ever-present problem. The board did not see an end to war of maneuver in the endless trenches of the Western front. Rather they saw an entire front that “could be included within the confines of Texas alone.”<sup>33</sup>

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<sup>28</sup> Ibid., p. 31.

<sup>29</sup> Ibid., p. 5.

<sup>30</sup> Ibid., pp. 5-7.

<sup>31</sup> Ibid., p. 27.

<sup>32</sup> Ibid., p. 5, 28.

<sup>33</sup> Ibid., p. 8.

Further, they saw the ability of a cavalry division to move cross-country over extended distances faster and arrive fresher than other types of units as an important quality that insured their future.<sup>34</sup> As important as the cavalry's unique capability, the board saw an even more important issue in the proper means of employing their force that it not be "frittered away or wasted unnecessarily."<sup>35</sup> This message continued to be a common theme as commanders were forced to decide how best to use their specialized reconnaissance units as they began to emerge. The agreed on method in 1919 for preventing the misapplication of the use of cavalry was centralized command and control of cavalry. Only when needed would cavalry be "sent or loaned to lesser commands as occasion may demand."<sup>36</sup> The Superior Board completed its work on 1 July 1919, but Pershing did not release his findings until he had time to contemplate its content, thus it did not make its way to the War Department for almost two years.<sup>37</sup>

While the United States attempted to learn the lessons of the Great War from the experience of others, the "others" took their own lessons from the experience. Great Britain entered the interwar period with an undefined continental commitment that in some ways hampered their ability to reform or experiment.<sup>38</sup> J.F.C. Fuller remarked that the cavalry officers in Great Britain led the fight against any expansion of the armored force and described them as, "this equine Tammany Hall, which would rather have lost the war than have seen cavalry replaced by tanks."<sup>39</sup> The Germans looked on the issue with clear and rational analysis. As losers they were willing to look for answers in new techniques and saw great promise for their cavalry with the continued incorporation of aviation, radio technology and mechanization.

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<sup>34</sup> Ibid., p. 27.

<sup>35</sup> Ibid., p. 27.

<sup>36</sup> Ibid., p. 28.

<sup>37</sup> Wilson, *Maneuver and Firepower*, p. 86.

<sup>38</sup> Dominick Graham and Shelford Bidwell, *Fire-Power, British Army Weapons and Theories of War, 1904-1945* (London: George Allen & Unwin, 1982), p. 205.

<sup>39</sup> J.F.C. Fuller, *Memoirs of an Unconventional Soldier* (London: Ivor Nicholson and Watson, 1936), p. 361, 363.

Moreover, they had the support of General Hans von Seeckt to move ahead with these measures.<sup>40</sup> General Heinz Guderian, another German associated with interwar mechanization theory may have drawn his ideas from the ideas of General Hermann Francois, I<sup>st</sup> Corps commander at the decisive battles of Tannenberg and the first battle of the Masurian Lakes where deep encirclements achieved dramatic results.<sup>41</sup> Regardless of where he got his ideas, Guderian and the Germans were experimenting with motorization and mechanization in the early 1920s.<sup>42</sup>

Regardless of the thought abroad, the American people, as they were prone to do, turned their backs on the armed forces wanting an organization that was small in size, inexpensive to maintain and out of the public eye.<sup>43</sup> The Army forced to distribute its small budget across the entire force deferred modernization. When Congress created the Air Corps they did not appropriate any additional funds, thus forcing the Army to do even more with an already limited budget.<sup>44</sup> Against this backdrop, the National Defense Act of 1920 restructured the cavalry arm of the Army. The National Defense Act also created new jobs inside the War Department that had a lasting impact on the development of mechanized reconnaissance units during the interwar

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<sup>40</sup> Grahm, *Fire-Power*, p. 205 and Robert M. Citino, *Armored Forces, History and Sourcebook* (Westport, Connecticut: Greenwood Press, 1994), p. 51.

<sup>41</sup> Yale, *Alternative to Armageddon*, p. 70. For concise description of actions at Tannenberg and Masurian Lakes, see Winston Churchill's, *The Unknown War* (New York: Charles Scribner's Sons, 1931).

<sup>42</sup> Heinz Guderian, *Panzer Leader* (New York: E. P. Dutton and Co., 1952), p. 21, 24. In the early 1920s, Heinz Guderian wanted to experiment with tanks in a reconnaissance role moving to the front of horse cavalry. Unlike in the United States, he was limited by the Treaty of Versailles and forced to use "armoured troop carriers." These vehicles, although they had four-wheel drive, were of limited utility on anything less than a road. Even with these limitations, Guderian saw in his experiment the means to transform "motorised supply troops into combat troops." Also somewhat similar to the course of events that would begin to unfold in the United States throughout the 1930s, Guderian also encountered those who viewed his experiment as folly offering, "To hell with combat! They're supposed to carry flour!"

<sup>43</sup> Griffith, *Men Wanted for the U. S. Army*, p. 1.

<sup>44</sup> *Ibid.*, p. 111.

years, specifically the creation of the Chief of Cavalry. Along with the Chiefs of Infantry, Artillery, and Air Service for their respective branches, the Chief of Cavalry had a great deal of influence at the War Department in regard to all cavalry matters, including the integration and implementation of new technologies.<sup>45</sup>

When the law was put into effect in 1921, the cavalry service was to retain one active and one inactive division. The single active division, The 1<sup>st</sup> Cavalry Division was organized as such on 12 September 1921.<sup>46</sup> Major General Robert Lee Howze served as the commander of the division, which was to be composed of two brigades a field artillery battalion, ambulance company and an engineer battalion. Each brigade retained two cavalry regiments, a machine gun squadron and headquarters troop. Thus, in 1921, Congress reduced the seventeen active regiments to fourteen, but the cuts went beyond even this. The remaining fourteen active duty regiments were skeletonized by placing selected troops and squadrons on ‘inactive’ status, so in essence the entire cavalry force was operating at half strength.<sup>47</sup> With all these cuts the cavalry force was left with 721 officers and 8,887 men by the end of 1923 and it would remain at this relative strength until the first signs of expansion started to appear in the late 1930s.<sup>48</sup> Officers displaced by the cuts were used to train National Guard and Reserve cavalry units.

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<sup>45</sup> Memorandum, Major General W. A. Holbrook, Chief of Cavalry, to the Director, War Plans Division, “Duties and Responsibilities of the Chiefs of the Combatant Arms,” 8 September 1920, file 323.362/316, Office of the Chief of Cavalry Correspondence, 1921-1942, box 7A, RG 177 cited in Dave E. Johnson, “Fast Tanks and Heavy Bombers, The United States Army and the Development of Armor and Aviation Doctrines and Technologies, 1917 to 1945,” Ph.D. dissertation, Duke University, 1990, p. 117.

<sup>46</sup> Major Bertram C. Wright, *The 1<sup>st</sup> Cavalry Division in World War II* (Japan: Toppan Printing Company, 1947), p. 3. The entire division did not assembled in one place until 1941 at Fort Bliss, Texas. At the same time, the unit expanded from 3,575 to a much more robust organization of some 10,110 troopers. The 1<sup>st</sup> Cavalry Division’s first commander, Robert Lee Howze’s son, Hamilton H. Howze will appear later in this dissertation. Hamilton H. Howze married the daughter of Guy V. Henry while attending the Advanced Equitation Course at Fort Riley, Kansas in 1936. Section 1, Summary of Interviews, box 1, Papers of Hamilton H. Howze, United States Army Military History Institute, hereafter cited as MHI, Carlisle Barracks, Carlisle, Pennsylvania. See note 47 for further explanation.

<sup>47</sup> Stubbs, *Armor-Cavalry Part I*, p. 53 and Herr, *The Story of the U.S. Cavalry*, p. 244.

<sup>48</sup> Stubbs, *Armor-Cavalry*, p. 53.

The first Chief of Cavalry, Major General Willard A. Holbrook, was not pleased with the relative strength of his branch given what he saw as an important mission that “particularly since 1910” had begged for a larger force. The mission was “the patrol and security of the Mexican frontier.”<sup>49</sup> In the same article, Holbrook introduced a number of common themes that recurred throughout the interwar years. He cautioned readers not to be swayed by “the three and a half years of struggle in the trenches” since they were the “result of the lack of power of the opposing forces to finish each other off.”<sup>50</sup> He also lamented the dearth of observers on the Eastern Front of the Great War “where cavalry found its greatest usefulness.”<sup>51</sup> Holbrook’s comments reflected a belief that the promise of the utility of the horse in the next war had not been shattered by the last war. He also cautioned readers not to place too much faith in the emerging technologies of the age.

Holbrook considered trucks “slaves of the road and subject to its condition” and were furthermore, because of their “vulnerability” required “to stop far from the battlefield” rendering those who depended on them weary from their ensuing long march and “only partly equipped.”<sup>52</sup> He deemed tanks incapable of occupying “any ground without the support of friendly troops.”<sup>53</sup> Airplanes, although very capable of assisting in the conduct of reconnaissance, were also constrained by “atmospheric conditions” and equally incapable of holding terrain or taking

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<sup>49</sup> “Plead to Maintain Cavalry Strength, Chief Wants Present 20,000 Retained When Army Total is Reduced, Points to Past Efficiency, and Necessity for Doing What Other Nations Consider Wise—Needed for Border Patrol,” 17 April 1921, *The New York Times*. The son of the first Chief of Cavalry, Willard H. “Hunk” Holbrook, ultimately married one of last Chief of Cavalry’s, John K. Herr’s, daughters. “Hunk” Holbrook and Helen Herr’s daughter, Joanne, married George S. Patton, III, son of “Old Blood and Guts” himself, George S. Patton, Jr. I have included this seemingly trivial material to help illustrate very early in this dissertation the intimacy of the pre-World War II U. S. Army because of its relatively small size.

<sup>50</sup> Ibid.

<sup>51</sup> Ibid.

<sup>52</sup> Ibid.

<sup>53</sup> Ibid.

“enemy prisoners.”<sup>54</sup> Holbrook conceded that all of the emerging technology could serve the horse under specific conditions, but the lack of developed roads in “North and South America, Asia, Africa, and Australia” continued to favor the retention of the large horse cavalry units.<sup>55</sup>

Even with such radical reductions affecting the force as a whole, the 1922 edition of the *Rasp*, the Cavalry School’s annual yearbook, provided a snapshot of how the force viewed itself in the present and how it saw itself relative to the future. Major George S. Patton, Jr. of the 3<sup>d</sup> Cavalry Regiment, prepared an essay for that year’s edition. Even though he had been associated with the first U.S. tank forces in World War I his short piece on what was required of a good cavalryman focused on veterinary science and equine care. He told students and fellow professionals that, “You must become a horsemaster, a scholar, a high minded gentleman, a cold blooded hero and a hot blooded savage if you would be a successful cavalry leader.”<sup>56</sup> If Major Patton found the prescription for being a good cavalryman in horsemanship and not in the study of vehicular applications in 1922, Colonel Hamilton S. Hawkins, “Mr. Cavalry,” provided a succinct explanation for why the cavalry could expect to see future service in its present form.

Colonel Hawkins’ work was titled “Why is the Cavalry Indispensable?” The greatest value of this brief essay was its ability to plainly explain, from the perspective of a senior officer who had seen service both in the recent world war and on the border, the role of cavalry. Colonel Hawkins saw the cavalry as an integral member of the combined arms team that included infantry, artillery and cavalry. As a member of this team he listed ten functions the cavalry was expected to perform: obtain information, guard against surprise, hold terrain until

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<sup>54</sup> Ibid.

<sup>55</sup> Ibid.

<sup>56</sup> George S. Patton, Jr., “The Cavalryman,” in the *Rasp*, (Fort Riley, Kansas: The Cavalry School, Army of the United States, 1922), pp. 166-167. . See D’Este’s, *Patton, Genius for War* (New York: Harper Collins, 1995) for more on Patton’s time at Fort Riley at this point in his career. Patton also became a master of machine gun tactics and gained a hands on ability with these modern weapons that exceeded the course requirements. His instructor was then Lieutenant Paul Robinett who went on to attend the French Cavalry School in 1925-1926 where he drove French armored reconnaissance vehicles. Patton taught Robinett to fence on Sundays as repayment for his additional instruction on machine guns. Robinett went on to command a Combat Command during World War II.

infantry arrives, hide the movement of the infantry, strike suddenly and swiftly against points holding up the advance of the infantry, delay to allow the infantry time to escape, exploit success of the infantry, pursue the beaten enemy, attack and delay the enemy's attempt to commit his reserve, and to keep off enemy cavalry.<sup>57</sup> To perform these missions Colonel Hawkins saw a place for the motor truck to help improve the cavalry's "radius" of operation by increasing the speed and distance logistics could be transported. The airplane was to more effectively direct the movements of the cavalry.<sup>58</sup> Tanks were also seen as supporting cast members and he concluded that modern methods and technology must be integrated, but the cavalry was still the cavalry.<sup>59</sup> This conclusion left some room for interpretation. Was cavalry a mission to be accomplished regardless of the equipment used?

Colonel Hawkins' cavalry was horse mounted. There was room for technology and modernization as long as no one misunderstood the fact that these modern conveniences were only present on the battlefield to support the horse mounted soldier. Horses and the men riding them were expected to defeat troops equipped with machine guns and modern rapid firing artillery by rapidly attacking across open areas with the support of their own machine guns and artillery. Open order movements aimed at the enemy's flanks were viewed as other means to limit the impact of the enemy's firepower.<sup>60</sup> Hawkins' views were reinforced by the basic history instruction offered at the Cavalry School that emphasized the Middle Eastern theater and the Eastern Front:

The information given in these lectures proved beyond a doubt, that, during the World War, Cavalry was used extensively, that it was used effectively, and at times was used brilliantly, being the deciding factor in campaigns, operations, and minor actions.<sup>61</sup>

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<sup>57</sup> Hamilton S. Hawkin, "Why Cavalry is Indispensable?" in the *Rasp* (Fort Riley, Kansas: The Cavalry School, Army of the United States, 1922), p. 164. Hamilton S. Hawkin's sister was married to Robert L. Howze, commander of the 1<sup>st</sup> Cavalry Division.

<sup>58</sup> *Ibid.*, p. 164.

<sup>59</sup> *Ibid.*, p. 165.

<sup>60</sup> *Ibid.*, pp. 164-165. Open order refers to the amount of space between advancing soldiers as they attacked on line.

<sup>61</sup> *Rasp*, 1922, p. 52.

It later became evident that the officers who most strongly advocated the retention of the horse only took away those portions of the lectures that suited their needs, chiefly that when the supply system broke down, horses could live off the land. This largely ignored the fact that “mechanical transport was, obviously, the backbone of the whole supply system.”<sup>62</sup> The operations carried out in Palestine had largely depended on the already established network of railroads and were further supplemented with trucks.<sup>63</sup> Little was made of the campaign conducted in Mesopotamia in October 1918 where armored cars were substituted for horses because of a lack of water or that Allenby’s Desert Mounted Corps and 4<sup>th</sup> Cavalry Division were often accompanied by a radio carrying Ford car.<sup>64</sup> For most, the horse reigned supreme.

The cavalry community was not alone in its passion for horses, but the evidence was particularly striking among the class of mounted warriors.<sup>65</sup> Large portions of the *Rasp* were dedicated to the coverage of polo and fox hunting.<sup>66</sup> It was noted that, “There is probably no other place in the world, where as much interest is shown, or support given polo, as is found in the Philippines.”<sup>67</sup> The photographs of horses and riders in the annuals of the cavalry school were filled with names such as Black Belle, Dutchman, Gooney, Bold Boy, Iron Star, and Lame

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<sup>62</sup> *Cavalry Combat*, pp. 477-479.

<sup>63</sup> *Ibid.*, p. 475. As a basis of comparison, the Palestinian theater was approximately the same size as the area of operations during the American Punitive Expedition to Mexico in 1916, 100 miles by 400 miles.

<sup>64</sup> *Ibid.*, p. 325, 471.

<sup>65</sup> Johnson, *Fast Tanks and Heavy Bombers*, pp. 298-299 and Major General Adrian St. John, interview by author, transcript, Reichelt Program for Oral History, Florida State University, p. 1. General St. John’s father served during World War I as a chemical officer. Even so, General St. John remembers growing up around horses and playing polo. Graduating from West Point in the January Class of 1943, he was in the last class to receive formal riding instruction.

<sup>66</sup> In the *Rasp*, 1922. “Polo,” p. 138-163. “Fox hunting in the Army of Occupation in Coblenz, Germany,” pp. 127-132 and Herr, *The Story of the U.S. Cavalry*, p. 247.

<sup>67</sup> *Rasp*, 1922, p. 150.

Deer. The only vehicle depicted in the 1922 edition was a single photo of a truck identified as the “sketching limousine.”<sup>68</sup>

Thus, with the Army of Occupation in Coblenz filling its time with fox hunting, racing and polo while the state side cavalry force underwent considerable reduction in force, the cavalry community as a whole entered into a long lull. It was not opposed to modernization and technological innovation, but it was clear that such measures were only useful if they in some way served the horse. The role of strategic reconnaissance was largely abandoned with the expectation that the airplane and the newly formed Air Corps would provide this information. It would be unfair to say the force was obsessed with horses, but it was clear that those with equine interests were not uncommon and carried with them a certain degree of institutional momentum. Even so, the force’s willingness to embrace modernization, recognition that it would continue to need increasing amounts of firepower to remain relevant provided the opportunity for the future employment of specialized formations to serve and expand the traditional roles of the horse mounted cavalry.

Across the Rhine from the American fox hunting cavalrymen, General Hans von Seeckt was in the process of rebuilding the limited army allowed under the Treaty of Versailles. During the recent war he had spent considerable time on the Eastern Front and was convinced that large massed armies were “anachronistic,” and was determined to restore movement to the battlefield.<sup>69</sup> He continued to see a role for the cavalry, along with the integration of mechanization and aviation and that it would need infantry, field artillery and communications support were it to maintain its relevance.<sup>70</sup> He kept these concepts in mind when he restructured

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<sup>68</sup> Ibid., p. 52.

<sup>69</sup> Robert M. Citino, *The Evolution of Blitzkrieg Tactics, Germany Defends Herself Against Poland, 1918-1933* (Westport, Connecticut: Greenwood Press, 1987), pp. 70-71.

<sup>70</sup> Ibid., p. 72. General von Seeckt was a student of the American Civil War. He thought of cavalry in the sense of the American experience where the horse was largely a means of transporting a rifleman to the battlefield and that the horse provide the mobility to allow for rapid changes in location. See also Corum, *Roots of Blitzkrieg*, pp. 31-32. Patton assembled an extensive collection of note cards with concise learning points he had taken from a variety of authors and Great Captains such as Napoleon and Frederick the Great, which he kept in an oak file box. Patton read a paper prepared by von Seeckt, “Armies of Today” and prepared a note card only days before he departed from Hawaii in April 1928 to join the Office Chief of Cavalry.

the German army's infantry divisional reconnaissance unit. Growing from a single squadron to a battalion of two squadrons, the new unit also contained a detachment of armored cars and a bicycle company. General von Seeckt also doubled the amount of communications assets available to the infantry division in line with his desire to restore mobility, which would require flexible command and control.<sup>71</sup> The German army instituted these reforms in 1923.

The United States Secretary of War, Dwight Davis, visited Great Britain in 1927 where he saw a smaller mechanized force beat a larger non-mechanized force.<sup>72</sup> The exercise Secretary Davis witnessed may have caused Ruyard Kipling to remark that "It smells like a garage and looks like a circus," but what Davis saw inspired change.<sup>73</sup> Following Davis' visit to the British mechanized maneuvers in 1927, the general staff began to see a need to embrace mechanization in the same manner in which Billy Mitchell had embraced aviation. They acted on this by issuing a memorandum in March 1928 that explained how the mechanized force was intended to fit into the existing organization of the Army.<sup>74</sup> The same year, Major General Herbert B. Crosby, Chief of Cavalry, recommended that a small number of tanks and anti-tank weapons be added to the cavalry division.<sup>75</sup> Colonel Adna R. Chaffee, Jr., was working in the War

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Patton homed in on von Seeckt's call for great mobility on the future battlefield made possible through the extensive use of cavalry, mechanized and motorized units. Roger H. Nye, *The Patton Mind, the Professional Development of an Extraordinary Leader* (Garden City Park, New York: Avery Publishing Group, 1993), p. 90 and The Patton Papers, USMA.

<sup>71</sup> Corum, *Roots of Blitzkrieg*, p. 45.

<sup>72</sup> Johnson, *Fast Tanks and Heavy Bombers*, p. 218 and 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), p. 82. Historian Timothy K. Nenninger, Military Records Archivist, National Archives II, writes in the notes section of "Organizational Milestones," in *Camp Colt to Desert Storm, The History of the U. S. Armored Forces* (Lexington, Kentucky: University Press of Kentucky, 1999), p. 62, that he has been unable to uncover any "corroborating evidence from contemporary documentation that Davis actually attended these maneuvers" but neither "is there any reason to doubt" that he actually went.

<sup>73</sup> Fuller, *The Army in My Time*, p. 188.

<sup>74</sup> Robert A. Miller, "The United States Army During the 1930s," Dissertation Princeton University, 1973, pp. 119-120.

<sup>75</sup> Nenninger, "The Development of American Armor," pp. 83-84.

Department's Training Section of the G3 when the Chief of Staff of the Army, General Charles P. Summerall received the directive from the Secretary of War to begin mechanized testing at Fort Leonard Wood, outside Washington presently known as Fort Meade, Maryland, in July 1928.<sup>76</sup> Approximately 3,000 troops were to take part in a test of light and medium tanks, motorized artillery and infantry, support troops, and even cavalry mounted in armored cars.<sup>77</sup> The "Provisional Platoon, 1<sup>st</sup> Armored Car Troop," was activated on 15 February 1928 at Fort Myer, Virginia to participate in the experiment. One might suggest this was the genesis of specialized reconnaissance formations in the modern army.<sup>78</sup> The first test involved a road march from Fort Leonard Wood to Aberdeen Proving Grounds to Carlisle Barracks and back to Fort Leonard Wood. The vintage World War I equipment was barely capable of making 4 mph and the visits of foreign military attaches were cancelled since the experiment was viewed as an embarrassment.<sup>79</sup>

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<sup>76</sup> Gillie, *Forging the Thunderbolt*, p. 24. Adna Chaffee Jr.'s personal perseverance was instrumental in the creation of the Armored Force and his involvement is closely detailed by Gillie. The son of a former Army Chief of Staff, he only joined the Organization and Training Section of the Army G3 in 1927. Prior to this, he had no knowledge of mechanization, but from 1927 until his untimely death in 1941 he was the Army's chief advocate of mechanization and shaping the future Armored Force. Nenner, "Organizational Milestones," in *Camp Colt to Desert Storm*, p. 41. Patton joined the Office Chief of Cavalry in May 1928, and thus would have been close to these early experiments even if he had no direct participation. Woolley, "Patton and the Concept of Mechanization," p.75.

<sup>77</sup> Tedesco, "Greasy Automatons," p. 27.

<sup>78</sup> "History of the 91<sup>st</sup> Reconnaissance Squadron, 15 February 1928-14 May 1941," folder CAVS-9190.1, Box 18231, Entry 427, RG 407, NAI. After completing the tests at Fort Leonard Wood the "Provisional Platoon" traveled to the only active Cavalry Division at Fort Bliss, Texas where it was redesignated A Troop, 1<sup>st</sup> Armored Car Squadron. On 1 July 1939 it became A Troop, 1<sup>st</sup> Reconnaissance Squadron and was ultimately designated 91<sup>st</sup> Reconnaissance Squadron. When its parent unit the 1<sup>st</sup> Cavalry Division shipped to the Pacific in 1942 it was shifted to the TORCH invasion force and served out the remainder of the war in North Africa, Sicily and Italy.

<sup>79</sup> Nenner, "American Armor," pp. 85-88 and Gillie, *Forging the Thunderbolt*, pp. 21-24 and Johnson, *Fast Tanks and Heavy Bombers*, pp. 218-219.

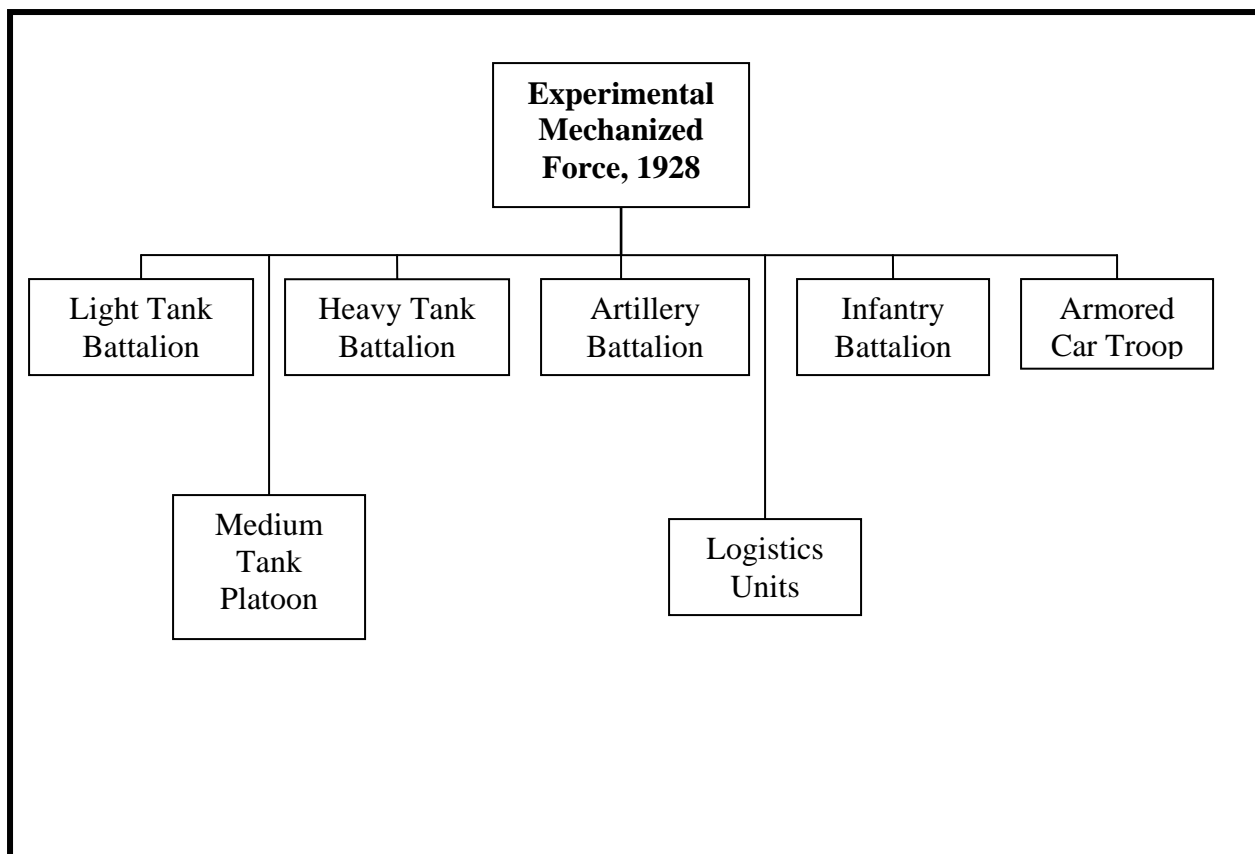


Figure 2

### Experimental Mechanized Force 1928

The first commander of the infant reconnaissance force was Captain Harold G. Holt, 9<sup>th</sup> Cavalry Regiment, who had been stationed at Fort Riley, where he was a horsemanship instructor before being tapped for his new duty. His soldiers were drawn from the 3<sup>d</sup> Cavalry Regiment at Fort Myer, rather than his own unit which was one of the two black cavalry regiments in the Army. Captain Holt's new unit received its motorization instruction at Camp Holabird, Maryland at the Motor Transportation School and then traveled on to Camp Meade for instruction in the use of machine guns and "one-pounder guns." Trucks for the new unit came from Fort Bragg, North Carolina and Fort Benning, Georgia.<sup>80</sup>

<sup>80</sup> *The Cavalry Journal*, vol. XXXII (April 1928), pp. 300-301, and Captain Harold G. Holt, "The 1<sup>st</sup> Armored Car Troop," *The Cavalry Journal*, vol. XXXII (October 1928), p. 599.

Having secured their eight trucks in May 1928, the platoon set to the task of building “imitation armored car bodies” before moving on to take part in the Experimental Mechanized Force.<sup>81</sup> By then the unit had expanded from the original authorization of twenty-three enlisted and one officer to forty-seven enlisted and two officers. Their new steeds were classified as *Armored Car, Light T-1* and *Armored Car, Medium T-2*. Each was capable of cruising 150 miles on a single “drink” of fuel and were armed with .30 calibre machine guns. Armored protection was limited to one-eighth inch plating, which was expected to stop service ammunition fired from beyond 80 yards, and armor-piercing ammunition from ranges exceeding 780 yards.<sup>82</sup>

*The Cavalry Journal* article that introduced this unit remarked that,

Armored cars, like aircraft, are of special value to cavalry in facilitating reconnaissance and thereby making it possible for the main cavalry forces with supporting troops, including artillery and tanks, to concentrate their chief efforts in the most advantageous direction.<sup>83</sup>

Cavalry once again had a stake in strategic reconnaissance and the first signs were now seen that a specialized force was needed to maximize the impact of larger formations that might include tanks, artillery and supporting troops. The idea of reconnaissance was not new, but the use of armored cars to perform this task was an important step.

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<sup>81</sup> Holt, “The 1<sup>st</sup> Armored Car Troop,” p. 599.

<sup>82</sup> *Ibid.*, pp. 600-601

<sup>83</sup> *Ibid.*, p. 301 and Woolley, “Patton and the Concept of Mechanization,” p. 75. *The Cavalry Journal* was published by the Office Chief of Cavalry, which was considered the “citadel of tradition.”



Figure 3

The T-1 Armored Car weighed 2,500 lbs. and was powered by a 6 cylinder Pontiac engine. Armor plating in front of the driver afforded the three-man crew (1 driver and 2 gunners) protection against .30 caliber bullets. *The Cavalry Journal*, October 1928.

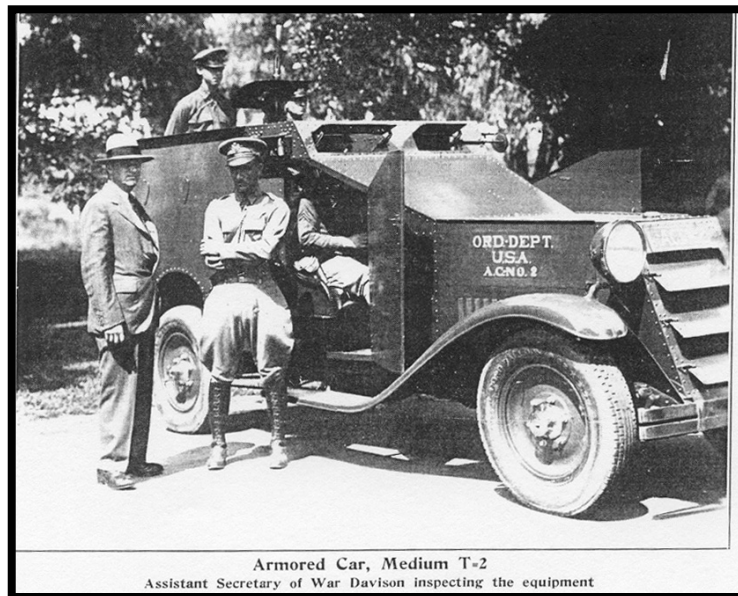


Figure 4

The T-2 Medium Armored Car weighed 5,500 lbs. and was powered by an 8 cylinder LaSalle engine. This vehicle featured folding armor that provided the four-man crew overhead protection. *The Cavalry Journal*, October 1928.

Experimentation was not limited to the East Coast during the summer of 1928. During the previous year the 1<sup>st</sup> Cavalry Division completed its first division level maneuvers since 1923.<sup>84</sup> The maneuvers were interesting because of the prominent constraints placed on the exercise's conduct. They also provided a glimpse of how on the ground war gaming was conducted and what peacetime biases might have influenced the later doctrinal debate about how best to perform reconnaissance. The 1<sup>st</sup> Cavalry Division conducted a number of innovative experiments during its divisional maneuvers seemingly on its own without direction from Washington or the Office of the Chief of Cavalry. In fact, Brigadier General George Van Horn Moseley, who commanded the division, had taken the initiative to write the sitting Chief of Cavalry, Major General H. B. Crosby that,

When the cowboy down here is herding cattle in a Ford we must realize that the world has undergone a change.<sup>85</sup>

Water was the first limiting factor in planning the divisional maneuvers.<sup>86</sup> Even though in subsequent years one of the chief detractions offered against mechanized reconnaissance was their reliance on fuel and oil, little was said in 1927 about the limiting factor that water placed on horses and men alike. Later, as the debate developed a number of articles in *The Cavalry Journal* went to great lengths describing cavalry operations from World War I in which mounted units traversed great distances for days with minimal water resources.<sup>87</sup>

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<sup>84</sup> Wilson, *Maneuver and Firepower*, p. 112.

<sup>85</sup> Brigadier General Van Horn Moseley to Major General H. B. Crosby, 9 December 1927, folder 322.02, Office Chief of Cavalry, box 7a, entry 39, RG 177, NAII cited in Johnson, *Fast Tanks, Heavy Bombers*, p. 125, In the same letter, Moseley requested more motorization and the addition of armored cars.

<sup>86</sup> Major George Dillman, "1<sup>st</sup> Cavalry Division Maneuvers," *The Cavalry Journal*, vol. XXXII (January 1928), p. 47. Since 1923 ranchers had been unwilling to allow the cavalry to conduct maneuvers on their land. Only a limited number of ranchers agreed to allow for the use of their land during the dry summer of 1927.

<sup>87</sup> Anonymous student of the Cavalry School, "The Horse in the Palestine Campaign," *The Cavalry Journal*, vol. XXXII (February 1928), pp. 259-265. Article details desert operations and impact on horses. It also lists historical examples. The article concludes that animals can go up to 72 hours without water. It also concludes that modern conditions will require most cavalry

Trucks were used extensively in support of the maneuvers. The 8<sup>th</sup> Engineer Battalion used trucks to move about and prepare the maneuver area by marking gates, repairing roads, bridges and improving the ever-important water facilities. The infantry troops for the exercise traveled 223 miles by truck in three days to join the division. The attached A Battery, 1<sup>st</sup> Field Artillery was organized as a portee battery utilizing trucks and trailers to move the cannons and tractors to Fort D.A.Russell, Texas, from Fort Sill, Oklahoma. The division also conducted an important exercise with portee cavalry.<sup>88</sup>

The 1<sup>st</sup> Cavalry Division motorized its entire rear echelon for the exercise.<sup>89</sup> The decision to motorize the logistics trains proved crucial. Distribution points for the units in the field were some 36 miles from the railhead and “the use of animal drawn trains exclusively under this situation would have been impossible” noted the closing remarks on supply and logistics. Trucks were embraced for their ability to extend the radius of operations for the division trains. Prior to including the use of trucks animal drawn trains were only capable of supplying the division eight miles from the railhead.<sup>90</sup>

Reconnaissance was performed by organic elements to the respective forces, WHITE and BROWN. Of note, the WHITE reconnaissance squadron camped at Well 88 and only dispatched patrols at 0800 hours. They were able to discover a BROWN column, but unable to notify their higher headquarters by radio and were forced to dispatch a motorcycle messenger.<sup>91</sup> This small

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marches to take place principally at night. The article places heavy emphasis on good mounts to achieve such results and acknowledges that such requirements take years to provide for.

<sup>88</sup> Captain Charles Cramer, “Portee Cavalry,” *The Cavalry Journal*, vol. XXXII (January 1928), pp. 66-69. Portee referred to the use of trucks and or trucks and trailers to move men, horses and equipment from one point to another. In this way the horse could be transported for miles and arrive fresh at the dismount point ready to conduct operations. This was the next logical step from the use of ships and trains to move horse equipped units.

<sup>89</sup> Dillman, “1<sup>st</sup> Cavalry Division Maneuvers,” pp. 46-49. Portee cavalry involves the use of vehicles and trailers to move horses and men over various distances until they are dismounted and used in the traditional sense.

<sup>90</sup> *Ibid.*, pp. 62-63.

<sup>91</sup> *Ibid.*, p. 52.

excerpt from a much larger exercise illustrated critical inconsistencies in later arguments pertaining to reconnaissance. The reconnaissance squadron encamped at the well because water was a major factor, it also confined their reconnaissance to daylight. It would be unfair to suggest, because it is not clear that it was the case, that the pack radio proved the weak link, but it is undeniable that the WHITE higher headquarters did not receive information about the BROWN column for nearly two hours.<sup>92</sup> Armored and unarmored cars equipped with radios later helped solve some of these problems. Ironically, those most opposed to mechanized reconnaissance would argue in favor of the horse because it was not limited by fuel or darkness, when these early examples clearly demonstrated deficiencies in horse reconnaissance as well as inconsistencies in use of supposed strengths such as ability to maneuver at night.

Captain Charles Cramer's F troop, 5<sup>th</sup> Cavalry conducted the maneuver's portee cavalry exercise at the conclusion of the larger maneuvers, thus no tactical lessons could be drawn from his troop's experience. Using twelve Liberty trucks, make-shift horse carriers were constructed to move the troop of forty-seven men and forty-eight horses the 288 miles to Fort Clarke.<sup>93</sup> The horses and men were no worse for the wear than had they moved as far by train and in the process the cavalry community gained its first large scale (certainly a relative term) experience with the notion of portee cavalry.<sup>94</sup> This was an idea that would surface again as the Chief of Cavalry went to great lengths in the late 1930s and early 1940s to preserve the role of the horse.

When the 1<sup>st</sup> Cavalry Division conducted maneuvers again in 1929 its different appearance reflected organizational changes that occurred in 1928. The Chief of Cavalry in 1928, Major General Herbert B. Crosby, in an early bid to increase the firepower of the cavalry division while at the same time having to remove personnel, reorganized the division's four cavalry regiments. Aside from redistributing the brigades' machine guns by giving them to each regiment, he authorized the addition of an Armored Car Squadron.<sup>95</sup> The 1929 maneuvers

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<sup>92</sup> Ibid.

<sup>93</sup> Liberty Trucks were of the World War I vintage in terms of motorized transportation.

<sup>94</sup> Cramer, "Portee Cavalry," pp. 66-69.

<sup>95</sup> Wilson, *Maneuver and Firepower*, pp. 112-115.

included the first incorporation of armored cars and anti-tank guns, and the division revisited the use of portee cavalry. The armored car troop, Troop A, 1<sup>st</sup> Armored Car Squadron, participated in the maneuvers. It was the “motley” assemblage of what had been Captain Holt’s homemade armored cars from the previous year’s mechanized experiment. The armor plating was soft and the vehicles were armed with .30 calibre machine guns.<sup>96</sup> The mechanized scouts earned high marks for their ability to conduct delaying operations, but their good mobility was attributed to dry weather and the lack of fences and ditches along the Texas roads that otherwise would have prevented them from gaining any degree of off-road mobility.<sup>97</sup> There was some surprise at the relative “invisibility” of the cars until they moved. Yet, even with these generally positive comments, a bias was forming that armored cars were best on roads and that they would be countered by units operating off the roads.<sup>98</sup> Portee cavalry employed during the tactical exercise this time were given high marks for strategic mobility, but were valued little for their tactical mobility.<sup>99</sup>

A later article written by an instructor at the Cavalry School dealt specifically with the role of the Armored Car Troop in the 1<sup>st</sup> Cavalry Division Maneuvers of 1929. There was no question that the intended purpose of the unit was one of reconnaissance, but already questions were beginning to appear about the possibility of mounting anti-tank weapons on these relatively

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<sup>96</sup> Lieutenant General John L. Ryan to Timothy Nenninger, 15 June 1967, Indian Harbor Beach, Florida. LTG John L. Ryan (Ret.) served with Troop A, 1<sup>st</sup> Armored Car Squadron, from December 1931 until May 1935. In his letter he also mentions the inclusion of six World War I French tanks that they moved around on Mack trucks for “border defense (???)” Ryan served in a variety of other armor related assignments, ultimately commanding the Armor Center from May 1956 until May 1959

<sup>97</sup> George S. Patton Jr., “The 1929 Cavalry Division Maneuvers,” *The Cavalry Journal*, vol.XXXIX (January 1930), p. 9.

<sup>98</sup> *Ibid.*, p. 10. Lieutenant General John L. Ryan to Timothy Nenninger, 15 June 1967, Indian Harbor Beach, Florida, holds a somewhat different view on mobility. Ryan says he saw real potential in the armored car’s ability to move greater distances cross country, faster than the horse.

<sup>99</sup> George S. Patton Jr., “The 1929 Cavalry Division Maneuvers,” *The Cavalry Journal*, vol.XXXIX (January 1930), p. 7. The exact quote used in the article was attributed to a French Portee Dragoons officer: “Their strategic mobility was excellent; their tactical mobility zero.”

light platforms and to see if smaller and lighter cars might be substituted since they would be less expensive and easier to maintain.<sup>100</sup>

During the regimental phase of the maneuvers the platoon conducted reconnaissance ten miles forward of the main body and across a five-mile front. Radio sets mounted in the vehicles allowed them to send reports every two hours. The platoon was generally successful in delaying the opposing force with the use of ambushes and effective long-range machine gun fire. Opposing forces learned to get off the roads and using their own towed anti-tank weapons as a supporting base of fire, maneuver to the flanks of the armored cars.<sup>101</sup> The horse mounted soldiers opted to attack the cars with mounted charges which umpires deemed successful and whose “opportune” arrival was all that prevented the untimely death of the armored car crews by “saber thrusts.”<sup>102</sup> Armed as they were with .30 calibre and .50 calibre machine guns and an assortment of small arms, it seemed odd that the armored cars would have succumbed so readily to such flamboyant attacks, yet this notion of vulnerability persisted.<sup>103</sup>

Major George Patton, Jr., and Major C. C. Benson wrote another article in 1930 that clearly outlined the concerns and possible advantages for the increased mechanization. This article acknowledged that since foreign nations were proceeding in the development of “fast

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<sup>100</sup> Major E. C. McGuire, “Armored Cars in the Cavalry Maneuvers,” *The Cavalry Journal*, vol. XXXIX (July 1930), p. 386.

<sup>101</sup> *Ibid.*, pp. 390-391, and Lieutenant General John L. Ryan (Ret.) to Timothy Nenner, 15 June 1967, Indian Harbor Beach, Florida. At this time the troop was not equipped with “voice” radios. They relied on key coded messages.

<sup>102</sup> Major E. C. McGuire, “Armored Cars in the Cavalry Maneuvers,” *The Cavalry Journal*, vol. XXXIX (July 1930), p. 392.

<sup>103</sup> Something similar was occurring in Germany. During the summer of 1932 General Guderian had his first opportunity to take the field at Grafenwöhr and Jüterborg with genuine armored reconnaissance vehicles. That summer the chassis of six-wheeled trucks covered in armor and built to specific design took the field to the disappointment of school children and infantrymen alike. Unlike in years past when *die Kinder* could satisfy their curiosity about the inner-workings of the armored car dummies by sticking a pencil through the sides, in 1932 they found real armor plating and probably a broken point. The infantrymen, accustomed to defending against the mechanized reconnaissance men with sticks, stones and the occasional bayonet were also equally confounded. Heinz Guderian, *Panzer Leader*, pp. 28-29.

tanks, armored cars, self-propelled gun mounts, and their auxiliaries,” that it would be “ostrich-like,” to ignore these developments.<sup>104</sup> The authors expressed concern that machines, unlike men and horses, required full rations of fuel, oil, grease and spare parts to remain effective. These detractors were reinforced with additional concern about the loss of immobilized vehicles and the ever-present issue of battlefield mobility. Horses were still attributed the accolades of all weather, stream swimming, forested hillside traversing, night time operating, any condition one can think of mobility.<sup>105</sup> Even with these limitations, the authors saw real reconnaissance potential in the armored vehicle’s ability to cover long distances at high rates of speed. Security operations, such as flank guards, could be enhanced by the ability of vehicles to move faster and farther to the flanks to warn of potential threats. All these positive attributes were couched in the terms of “wherever the terrain permitted the uses of machines.”<sup>106</sup>

Patton picked up with the same theme in yet another article in the same year. Again the issue of mobility was paramount in his argument noting that “in any theater of war save Western Europe,” the U.S. Army and its cavalry could expect no better than the road conditions of the United States, which at the time were only 6 ½ % improved.<sup>107</sup> Justifiably, he expressed concern that the assumption of “Weather is cool, roads are dry and hard, all bridges two-way and up to fifteen tons,” were all too often the conditions offered in map problems.<sup>108</sup> Even with these concerns, his theme thereafter was one of inclusion and combination of the best attributes of the horse and the machine to fulfil the roles assigned to the cavalry arm.

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<sup>104</sup> Major George S. Patton Jr., and Major C. C. Benson, “Mechanization and Cavalry,” *The Cavalry Journal*, vol. XXXIX (April 1930), p. 235.

<sup>105</sup> *Ibid.*, pp. 235-237.

<sup>106</sup> *Ibid.*, p. 239.

<sup>107</sup> Major George S. Patton Jr., “Motorization and Mechanization in the Cavalry,” *The Cavalry Journal*, vol. XXXIX (July 1930), p. 331. Patton did not define “improved road,” but one should infer he meant paved all-weather roads.

<sup>108</sup> *Ibid.*, p. 332. This was reminiscent of a lecture Patton gave in Boston, “Cavalry Patrols,” in 1924 Martin Blumenson, ed. *The Patton Papers* vol 1, 1885-1940 (New York: Houghton Mifflin, 1972), pp. 781-783.

Patton correctly stated that distant and strategic reconnaissance was still the function of cavalry and that the mounted arm had not been supplanted by the airplane with its lack of ability in “storms, fogs, darkness, [and] forests.”<sup>109</sup> He viewed the role of armored cars for this role with skepticism. He felt the loss of a single car would end the mission, whereas the loss of single lame horse only amounts to the loss of a single cavalry scout. In his opinion the cars were far too susceptible to barriers on the roads and would be unable to penetrate enemy screens to gather information. He saw some use for them as messengers to keep patrols linked, but saw no utility beyond simplified logistics for combining armored cars into single units. The same man who had written about the relative “invisibility” of armored cars in tactical exercises only months before now wrote that men mounted on horses were less conspicuous. According to Patton, the horse mounted soldier even had the advantage of his horse’s keener hearing to aid him in the accomplishment of his mission.<sup>110</sup> This provided an excellent example of Patton’s vacillating stance on utility and possibilities presented by mechanized reconnaissance units.

The article continued in the same vein finding only limited roles for mechanized forces in the other assortment of cavalry missions. Horse cavalry still held the advantage in his mind even when pitted against opposing mechanized forces. He concluded that, “In consideration of the foregoing it is our firm belief that the independent employment of mechanized forces is so largely illusory that it will never be seriously employed. Certainly not after a few trials.”<sup>111</sup> Perhaps the pictures used to illustrate the article stated the case more plainly. The frontispiece of that issue of *The Cavalry Journal* depicted horses negotiating the “water jump” during the Cavalry School Graduation Race Meet and the very next page was the beginning of Patton’s article. The only other illustration for the article filled the unused portion of the last page of Patton’s remarks. It depicted a truck mired to its axles while in the background a mule drawn logistics train moved on.<sup>112</sup>

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<sup>109</sup> Patton, “Motorization and Mechanization in the Cavalry,” p. 335.

<sup>110</sup> *Ibid.*, pp. 336-337.

<sup>111</sup> *Ibid.*, p. 347.

<sup>112</sup> *Ibid.*, p. 330, 348.

The year 1930 saw more than Patton's shifting position on the subject of armored cars and their future. The 1<sup>st</sup> Cavalry Division again took the field, this time in the combined Cavalry-Infantry field maneuvers held in May. The Corps Area commander's objective was to "illustrate the employment of troops with present strength and equipment under all modern conditions of warfare in a sparsely settled country with poor communications."<sup>113</sup> The armored car troop from the division was included to test specifically its ability to operate in "very brushy country."<sup>114</sup> During the exercise the armored cars covered the movement of motorized formations containing infantry and field artillery and were directed to conduct the rapid occupation of key fords and bridge crossings.<sup>115</sup> Nothing was said about the overall performance of the armored cars during this exercise.

Even with all the progress of the late 1920s and early 1930s there remained a great deal of doubt about the real utility of mechanization in the role of reconnaissance. Field Marshal Viscount E. H. H. Allenby's letter to *The Cavalry Journal* that accompanied his article "The Future of Cavalry" focused on the limitations and lacked any comment on the positive possibilities of mechanization and motorization. Specific to reconnaissance he still held that the airplane would do the distant work and that the increased use of mechanization in the performance of tactical reconnaissance could never "supersede" cavalry (from this, one is to assume he implies horse cavalry since the article draws heavily on historical accounts of horse cavalry operating in the Middle East during World War I). His view was that armored cars were "purblind" and the more "invulnerable the machine, the blinder the crew."<sup>116</sup> A car dominated the photo that accompanied the article which referred to the action in Palestine. The photo's citation read as follows: "This photograph was taken as the Field Marshal was making a

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<sup>113</sup> Major John B. Coulter, "Cavalry-Infantry Maneuvers, 1930," *The Cavalry Journal*, vol. XXXIX (July 1930), p. 349.

<sup>114</sup> *Ibid.*, p. 349.

<sup>115</sup> *Ibid.*, pp. 355, 356-357.

<sup>116</sup> Field Marshal Viscount E. H. H. Allenby to *The Cavalry Journal*, 30 October 1928, Office Chief of Cavalry, 95-5, United States Military History Institute, Carlisle Barracks, Pennsylvania, hereafter MHI.

reconnaissance immediately before the attack of September 19, 1918, on the stabilized front north of Jerusalem, which resulted in the destruction of the enemy's army . . ."<sup>117</sup> No one, unless it happened to be the photo editor, recognized the irony.

Even the comments of one of the most recognized and successful cavalry leaders of the last great war could not deter what was slowly taking place any more than the shifting views of one prominent American writer on the subject, Major George S. Patton.<sup>118</sup> Armored cars allowed the cavalry to reclaim a stake in the area of distant and strategic reconnaissance. The establishment of a second armored car squadron at Camp Holabird with its projected permanent home at Fort Riley, home of the Cavalry School, all but insured a continued if not expanding role for some form of mechanized reconnaissance force.<sup>119</sup> Changes were occurring at the front and rear of the cavalry division with the introduction of motorization and mechanization, but what had not changed was the notion that the horse would continue to dominate the cavalry force. This unquestioned truth only allowed for continued development of motorization and mechanization in ways that directly or indirectly served the horse. Progress, learning, and experimentation thus far had been largely voluntary and tinged with curiosity. Along the way, a list of arguments developed that sought to retard the expansion of motorization and mechanization, often focusing on mobility and logistical constraints. These themes took on an even more important life in the next level of development that was about to begin.

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<sup>117</sup> Photos accompany transcript of speech written by Hampson Gary, "Welcome to Field Marshal Lord Allenby," *The Cavalry Journal*, vol. XXXVIII (January 1929), p. 4.

<sup>118</sup> Patton read extensively on the desert campaigns during the interwar years. He gushed that R. M. P. Preston's *The Desert Mounted Corps* was "the greatest book" he had ever read. Blumenson, *Patton Papers*, vol. 1, p. 762. See Nye, *The Patton Mind*, pp. 58-59, for a more extensive list of the books Patton read related to desert warfare.

<sup>119</sup> "Progress and Discussion," *The Cavalry Journal*, vol. XXXIX (July 1930), p. 449 and "Progress and Discussion," *The Cavalry Journal*, vol. XXXIX (October 1930), pp. 606-608.

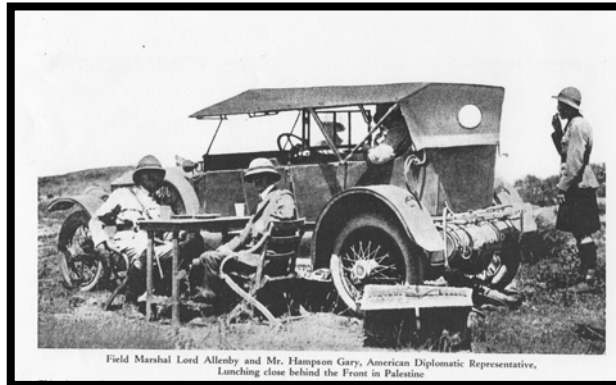


Figure 5

Field Marshal E. H. H. Allenby takes a break from reconnaissance on the Palestinian Front during World War I. The photo accompanied Allenby's letter published in *The Cavalry Journal*, January 1929.