

# Scouts Out — But Not in HMMWVs!

## The Rise and Fall of the HMMWV-equipped Heavy Maneuver

by Dr. Robert S. Cameron

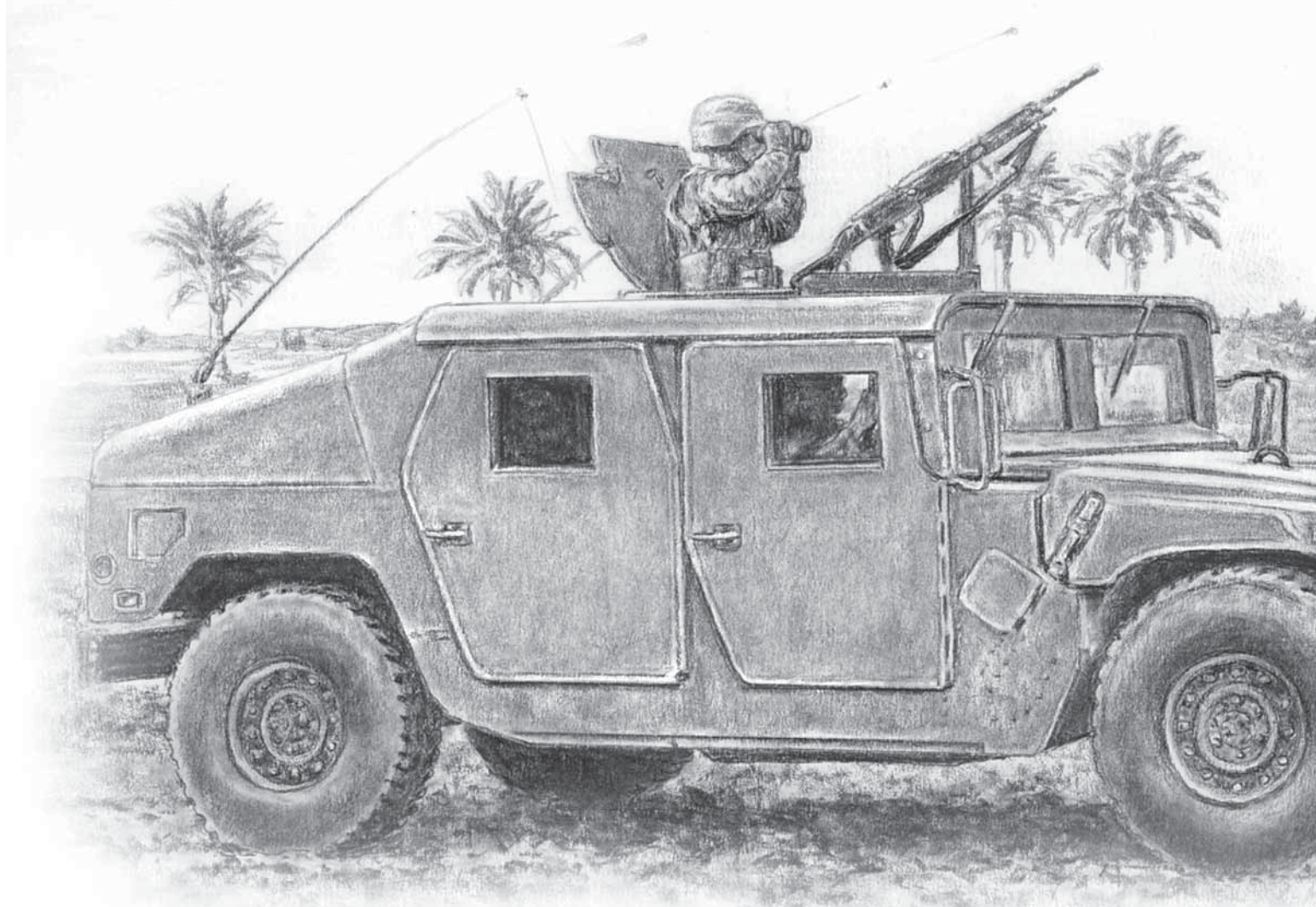
In March 2003, the start of Operation Iraqi Freedom sent heavy maneuver battalion scout platoons to war. Armed with a doctrinal emphasis on stealth and the evasion of hostile forces, they did so equipped largely with high-mobility, multipurpose wheeled vehicles (HMMWV). These platforms possessed minimum survivability. Unarmored, except for a Kevlar lining, they remained on the peripheries of the main effort during the drive into Baghdad. By 2004, improvised explosive devices (IED) and roadside ambushes characterized threat activities and underscored the vehicle's vulnerability. Casualties increased in direct relation to the soaring number of damaged and destroyed HMMWVs.

These losses triggered remedial measures. The most visible — and politically charged — included increased fielding of the up-armored M114 and the provision of add-on armor kits. Some maneuver battalions either exchanged their scout HMMWVs for M3 cavalry fighting vehicles (CFVs) or formed composite platoons of both vehicles. In some instances, HMMWVs, equipped with the long-range scout surveillance system (LRAS3), were

paired with M3s. The latter's armor and firepower protected the HMMWV, which identified targets from a safe distance. Ultimately, an institutional solution emerged: a reconfigured scout platoon with five HMMWVs, equipped with LRAS3 and three M3s. The new organization merged the stealth capabilities associated with the HMMWV and the firepower and survivability of the M3. In addition, the first steps were taken in 2005 toward a long-term solution through the acquisition of a new scout vehicle.

The HMMWV's inadequacy as a scout platform triggered these actions.

Although quiet, mobile, and sustainable, the vehicle's vulnerability to even small arms undermined its tactical value. Its inability to survive chance contacts with hostile forces, mines, and unexploded ordnance detracted from its ability to operate on a nonlinear battlefield where surprise encounters could be expected. Ironically, the recent adoption of the mixed M3/HMMWV scout platoon constitutes little more than a belated implementation of an idea repeatedly proposed since the 1980s. If the mixed platoon represents an optimal configuration, why did it take more than 15 years to field?



# Battalion Scout Platoon

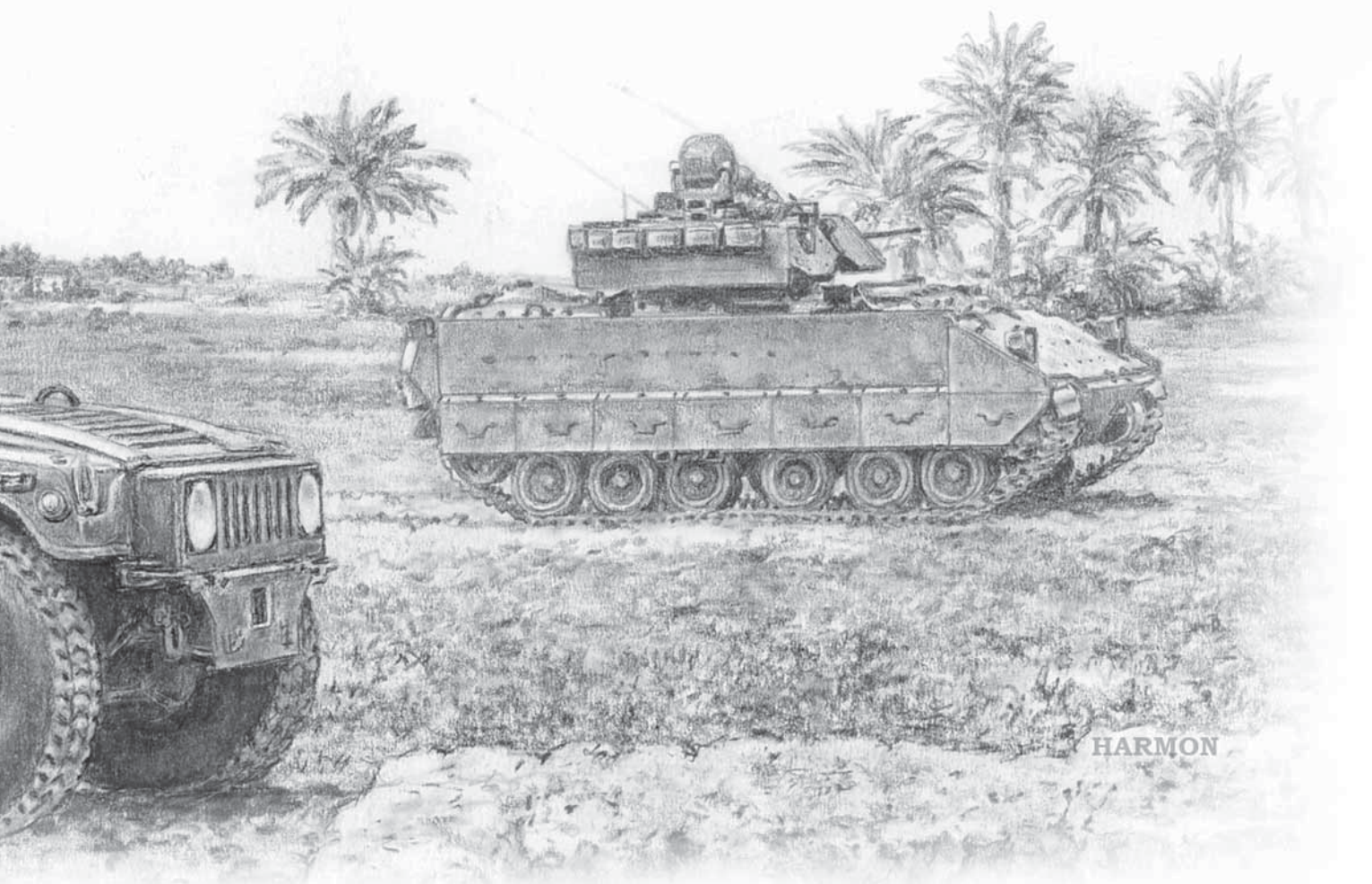
The answer lies in the studies that accompanied the initial decision to equip scout platoons with HMMWVs. These studies illustrate the pitfalls associated with insufficient attention to the heavy maneuver battalion's operational environment and reconnaissance needs, inadequate review of operational and historical experiences, and an overreliance on the results of modeling and simulation in an artificial environment. Current efforts to reorganize the scout platoon and acquire a new scout platform are the consequences of these shortcomings.

## Before Operation Desert Storm

During World War II, unarmored jeeps equipped the scout platoons of tank and armored infantry battalions. Light and mobile, the jeep nevertheless suffered from survivability issues similar to those more recently experienced by HMMWVs. In response, maneuver battalions augmented their scout platoons with tanks to overwatch the jeeps and provide a measure of combat power. The jeep's vulnerability led to adopting an armored scout platform in the post-World War II era. The platoon also tended to become more robust, capable of fighting for information when stealthy operations proved insufficient.

Throughout the Cold War, however, controversy surrounded the heavy maneuver battalion scout platoon. Its configuration repeatedly alternated between a light organization optimized for stealthy recon and a more robust one capable of aggressive action in the presence of hostile forces.<sup>1</sup> In the 1980s, fielding the M3 CFV to scout platoons at first seemed to resolve this organizational and doctrinal confusion. Heavy maneuver battalion scout platoons began to reconfigure into six M3s and 30 men. Designed to operate in three sections, this organization benefited from the vehicle's survivability, mobility, and lethality. It possessed the means to engage hostile reconnaissance assets and survive unexpected enemy contact. The principal drawback of the new scout platoon lay in the size and large acoustic signature of the M3, which made stealthy operations unrealistic. Designed to operate on battlefields populated by mechanized forces and antitank systems, survivability and lethality outweighed stealth.

The M3's fielding permitted the gradual replacement of those scout platoons equipped with a mix of the M113 and M901 improved tow vehicle (ITV). They, too, included three sections and 30 men, but an M113 and an ITV constituted each section. This





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mix provided each section an antitank capability suited to operations against mechanized Warsaw Pact forces. However, the overcrowded ITVs struggled to keep pace with the M113s and suffered from low operational readiness. Moreover, the entire platoon proved slower than the Abrams tanks, which also began to equip heavy maneuver battalions in the 1980s.<sup>2</sup>

The M3 platoon constituted a significant improvement over the M113 and ITV mix. Its capabilities clearly reflected advocates of robust scout organizations capable of fighting for information. However, by the mid-1980s, analysis of training rotations at the National Training Center (NTC) began to show a recurring pattern of heavy scout losses and reconnaissance failure. Too often, scout platoons became engaged in combat and were destroyed. The direct correlation between reconnaissance effectiveness and maneuver battalion success gave these results a disproportionate impact.<sup>3</sup>

Therefore, the Army undertook a detailed analysis of the problem. In 1987, it commissioned the RAND Corporation to study reconnaissance at the NTC. A team of subject-matter experts observed mounted training, conducted a comprehensive assessment of reconnaissance operations, and developed recommendations for improvement. Their final report attributed the reconnaissance failures to multiple causes, which included faulty staff work, poor or nonexistent tracking of reconnaissance assets, a command tendency to execute plans without awaiting scout reports, doctrinal flaws, and training deficiencies. At the platoon level, scouts failed “to accomplish their reconnaissance tasks because they seldom survive initial contact with enemy forces.”<sup>4</sup>

The study embraced stealthy, dismounted patrolling and stationary observation as the most successful reconnaissance methods. Too often, however, scouts found themselves engaged in sustained firefights that disrupted their reconnaissance mission and often ended with their simulated destruction. Criticism of the new M3 platoons focused on their lack of dismounts, their tendency to focus on mounted operations, and an insufficient number of vehicles for the tasks and area coverage required. The platform proved too large and loud; it could not be used effectively in silent watch. Its engines had to be started regularly to recharge the batteries for its electrical systems, including the thermal viewer. Its use as a scout platform compared unfavorably to the HMMWV used by the opposing force (OPFOR) scouts. The study favored the lightness, mobility, and quietness of this vehicle, which permitted rapid, stealthy movement. Indeed, the HMMWV’s qualities were directly linked to the success of OPFOR reconnaissance.<sup>5</sup>

After the Rand Corporation study was completed, the Center for Army Lessons Learned (CALL) continued to collect data on reconnaissance operations at the NTC. It found a 50 percent loss rate among scouts and persistently low rates of successful reconnaissance missions. CALL attributed these findings largely to training and the absence of stealth in scout platoon operations. With the success of battalion task force operations resting on reconnaissance activity, these results were worrisome.<sup>6</sup>

CALL also encouraged greater reliance on stealth to avoid firefights and casualties. Experimentation with alternate scout platoon organizations followed. In 1988, the NTC hosted a demonstration of a 10-vehicle platoon that offered greater coverage and separation of the platoon headquarters from the scout sections for better command and control. The unit included a two-HMMWV command element; a heavy section of four M3s and four motorcycles; and a light section of four HMMWVs. In this manner, the platoon benefited from the stealth capability of the HMMWV and the combat power of the M3. The mixed vehicle set permitted a degree of tailoring to fit varied tactical situations, and also found support in an Armor School white paper.<sup>7</sup>

During the same year, 1st Battalion, 64th Armor tested a pure HMMWV scout platoon organization at the NTC. The unit achieved several successes through reliance on the HMMWV’s quietness and small size. Observation teams reached critical observation points undetected, where they reported on OPFOR activity. The vehicles often evaded contact through stealth and completed their mission — a refreshing change from the steady failure reports that previously characterized reconnaissance at the NTC. This event encouraged interest in a HMMWV scout platoon, especially given the vehicle’s reliability, mobility, and sustainability. Even its lack of firepower and armor were considered attributes, since their absence would encourage stealth rather than firefights. However, when encounters with the OPFOR did occur, they tended to result in the HMMWV’s destruction — an unpleasant fact lost amid the general enthusiasm generated by the platoon’s apparent success.<sup>8</sup>

Formal studies of alternate scout platoon organizations followed. In 1989, three platoon configurations underwent testing and comparison, which included a baseline organization of six M3s; a mixed platoon with four M3s and six HMMWVs; and one with 10 HMMWVs and four motorcycles. All were evaluated in combat training center environments and via Janus modeling. Analysis found the HMMWV platoon to be the most effective, least costly, and most sustainable organization. It outperformed the other two configurations in the execution of zone recon, area recon, route recon, screen, and passage of lines. More-

over, the report found the HMMWV platoon “to be the most survivable and most successful in providing the task force commander with information on second echelon threat activity.” In terms of providing the battalion task force with advance warning of pending enemy action, this characteristic was important.<sup>9</sup>

The larger size of the mixed and HMMWV platoons permitted them to absorb losses and continue their missions. However, the M3 proved more survivable, and the final report noted that “the vulnerability of the HMMWV and MILMO [military motorcycle] vice the M3 CFV as a scout vehicle was a concern to be resolved.” Nevertheless, this concern seemed minor when compared to the generally superior performance of the HMMWV platoon over its competitors. The HMMWV platoon was cheaper, more sustainable, easier to deploy, and required minimal adjustments to training and doctrine. Therefore, the Army opted to reequip its heavy maneuver battalion scout platoons with 10 HMMWVs organized into a headquarters section with two HMMWVs, and four scout sections with two HMMWVs each.<sup>10</sup>

This decision marked a return to the World War II era’s reliance on a wheeled, unarmored scout vehicle. In that conflict, survivability issues dominated scout operations and led to subsequent reliance on armored scout platforms. Adopting the HMMWV scout platoon reversed this trend based on modeling and simulation efforts that, however sophisticated, did not reflect a real-world experience. Neither the computer nor the field phase of the 1989 study, for example, offered a cluttered battlefield populated with bypassed enemy forces, unexploded ordnance, urban environments, civilian crowds of uncertain disposition, or varied terrain considerations. All of these factors had been part of the scout’s experience in World War II and every conflict since. In the event of a chance encounter with hostile forces, could the HMMWV scout survive? The question was not entirely explored. Instead, stealth became equated with survivability.

### Desert Storm, Contingency Operations, and Force XXI

Operation Desert Storm occurred before most maneuver battalion scout platoons received their HMMWVs. Therefore, many platoons entered combat with M3s, although smaller numbers of other configurations were also present, including six platoons equipped with HMMWVs. At least one platoon leader favored the new HMMWV unit. He appreciated the mobility, quietness, and small size associated with the HMMWV and relied on these qualities to move to and on the battlefield. While operating as a forward screen, his unit routinely identified targets for the parent battalion task force to eliminate. In periods of frequent contact, however, the HMMWV scout’s only option was to hide because he was lacking armor protection. To compensate, the battalion employed heavier assets to clear a path, making it safe for the HMMWVs to proceed.<sup>11</sup>

Armor battalion and brigade commanders in theater proved much less sanguine about HMMWV scout platoons. They considered these units far too vulnerable, making their active employment on the battlefield too much of a risk. Therefore, HMMWV platoons were generally used to assist command and control functions and facilitate traffic movement, and were employed close to their parent battalions. Their role of forward reconnaissance was assumed by mechanized infantry or tank platoons temporarily thrust into the role of scouts.<sup>12</sup> Some commanders created ad hoc organizations to provide increased survivability to their scouts. In one instance, an improvised company team was created through the

concentration of a scout platoon, tank platoon, mechanized infantry platoon, and an engineer section. These units could be task organized, while tanks and mechanized infantry performed zone reconnaissance.<sup>13</sup>

Concerns over HMMWV vulnerability led the Armor School to request the cessation of HMMWV scout platoon fielding. Armor leaders sought further information on the employment of all scout platoon configurations in the Gulf War. They did not want to press the fielding of an organization that would either cost lives or be underused due to vulnerability concerns. Instead, they preferred a hardened vehicle for scouts, capable of surviving or destroying chance hostile contacts and moving through minefields and artillery.<sup>14</sup> Further study occurred — but so did HMMWV platoon fielding.

Analysis of combat operations during Operation Desert Storm identified problems encountered by most of the principal ground reconnaissance platforms employed by the Army. The M113, the M901 (ITV), and HMMWV had difficulty keeping ahead of the Abrams tanks and Bradley fighting vehicles, which constituted the main body of their parent organizations. They advanced less to detect and identify enemy forces, rather than simply stay in the lead. Moreover, HMMWVs generally did not survive chance encounters with hostile elements. Scouts equipped with the M3, however, had little difficulty maintaining their lead station and they proved much more survivable. These findings led to recommendations for a revised maneuver battalion scout platoon that included a mix of HMMWVs and M3s with a greater dismount capability. This combination provided the means to conduct either stealthy operations or a more aggressive reconnaissance likely to trigger hostile contact.<sup>15</sup>

Meanwhile, CALL continued to observe repeated reconnaissance failures at the NTC between 1991 and 1993. Command and staffing problems accounted for much of the poor showing, but survivability remained an issue. In those instances where divisional cavalry did not precede the brigade, the latter’s battalion scouts became the first to encounter OPFOR counterreconnaissance.



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They proved unable to breach this security zone, survive counter-reconnaissance actions, reach their objective, and observe activities deep in the enemy's rear area. When time constraints prevented deliberate, stealthy operations, scout platoons often resorted to a more aggressive, mounted approach. With the likelihood of enemy contact increased, HMMWV survivability plummeted. However, the M3's large size and noise often announced its presence, making stealthy reconnaissance more difficult, and increasing the likelihood of ambush. Overall survival rates for both vehicles averaged a poor 50 percent.<sup>16</sup>

Changes in doctrine and training did generate performance improvements, but they also underscored the dilemma associated with using stealth instead of more aggressive scouting techniques, which were likely to trigger combat. Doctrine emphasized the importance of stealthy operations, coordination of reconnaissance activity into battalion and brigade planning, and allocating sufficient time for the completion of recon missions. Scenarios at the training centers, however, rarely permitted the slow, deliberate pace associated with stealthy reconnaissance. Hence, battalion commanders faced with a tight timetable often chose to commence operations either without awaiting the completion of reconnaissance missions or by reliance on rapid, mounted scouting.<sup>17</sup> Such activity constituted a problem for HMMWV scout platoons, since they were not "to be employed in combat missions such as hasty attack or movement to contact."<sup>18</sup>

In 1995, the Army again commissioned the RAND Corporation to study reconnaissance at the NTC. The purpose of this study lay in determining the effectiveness of changes to heavy maneuver battalion scout platoon doctrine, materiel, and training implemented since the earlier 1987 analysis. Since that time, M3 and HMMWV platoons had replaced the interim M113 and ITV units, night-vision capabilities had improved, and considerable changes were effected in training to ensure scouts did not prematurely engage in combat. The new study found that scouts engaged in fewer firefights, tended to survive longer and complete more missions, and benefited from better operational readiness

rates. However, while the greater night-vision capabilities permitted scouts to reach destinations undetected at night, they were often found and destroyed during the daytime. The greater size of the HMMWV platoons permitted them to sustain greater loss rates and complete missions, but overall scout survivability still remained at an unacceptable 50 percent. The report noted that "the issue of scout survivability remains unresolved. Clearly, neither vehicle in use [M3 or HMMWV] is optimum for scouting. Either a new vehicle or a mix of vehicles may be a better solution."<sup>19</sup>

Neither suggested solution was new. The mixed scout platoon had been recommended since the mid-1980s, while design work on a new scout platform had been underway just as long. Dubbed the "future scout vehicle (FSV)," it offered improvements in survivability and lethality without compromising stealth. However, it remained a work in progress and did not evolve into an actual, fielded vehicle. Instead, the FSV was replaced by the future scout and cavalry system (FSCS), a joint program funded by the United States and Britain. The FSCS added the benefits of digitization and a sensor array, and became the desired replacement for both the M3 and HMMWV, neither of which had been designed exclusively for scout operations. By the late 1990s, the FSCS was expected to become the primary reconnaissance platform, while the older vehicles continued to serve as interim solutions. In actuality, funding constraints and Army Transformation ended the program.<sup>20</sup> Consequently, scouts continued to function in organizations built around the M3 or the HMMWV.

The 1990s also witnessed a change in the operational environment in which scouts operated. The end of the Cold War and the collapse of the Soviet Union eliminated the primary focus of Army doctrine for more than 40 years. Instead, the Army looked forward to a future marked by more frequent regional crises and a heightened involvement in a variety of peacekeeping, stability, and humanitarian activities quite different from the high-intensity combat associated with the Cold War. Army planners anticipated a battlefield characterized by nonlinear and noncontiguous operations against a variety of threats. The explosion of the internet and digital communications onto the market created both danger and opportunity. The Army sought to harness the capabilities of the new information age technology to tactical organizations in an initiative designated "Force XXI." Through the rapid acquisition and transfer of information, units would maneuver faster with greater precision. However, the new technologies placed a premium on information dominance, which, when coupled with a nonlinear battlespace and a higher operational tempo (OPTEMPO), meant an increased demand for reconnaissance and security at all levels.<sup>21</sup>

These developments did not augur well for heavy maneuver battalion scout platoons, which continued to have difficulty completing and surviving reconnaissance missions in the largely traditional scenarios used at the training centers. Overseas deployments in Somalia and Bosnia served only to underscore the problems associated with the HMMWV scout platoon. In Somalia, the presence of militant factions and hostile crowds created a dangerous environment for unarmored, wheeled vehicles. The threat became manifest during the fighting that erupted in Mogadishu in October 1993. This experience triggered a rapid procurement initiative to up-arm the HMMWV.<sup>22</sup>

In Bosnia, U.S. forces also entered a tense environment ripe with the potential for outbreaks of violence with little warning. The widespread presence



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of mines added an additional danger, particularly for unarmored, flat-bottomed vehicles, including HMMWVs. These threats led to the development of the M1114, an up-armored HMMWV. It entered service in 1996 and was employed in Bosnia. The M1114 benefited from improved ballistic protection, which shielded the crew from artillery, small-arms fire, and mine blasts. Its strengthened chassis supported the heavier armor, but the increased weight reduced mobility and increased component wear. The M1114 proved better suited to roads, while its improved survivability came at a cost in mobility and maintenance.<sup>23</sup>

In the Balkans, crowds were not deterred by the presence of a HMMWV, whether armored or not. The vehicle lacked the firepower and mass to deter hostile behavior. In many cases, crowds mobbed the vehicles, climbing on them, blocking doors, and destroying external features. The M1114 featured a hardened passenger cab, but the vehicle's weapon remained exposed and unprotected. Limitations to HMMWV effectiveness led the 1st Brigade, 1st Armored Division to organize two vehicle sets for operations. Low-risk and administrative actions became the purview of HMMWVs, while operations in high-risk environments were reserved for M3s and Abrams tanks.<sup>24</sup>

Similarly, other units began to experiment with alternate organizations at platoon and troop levels to improve the HMMWV's survivability. The 1st Battalion, 33d Armor, for example, grouped its scouts with tanks, mechanized infantry, mortars, and engineers. A typical organization included the scout platoon, a tank platoon, a mortar section, an engineer section, and two infantry squads. This improvised company team performed various reconnaissance and security actions.<sup>25</sup> The hunter-killer team concept also provided a means of exploiting the small size and quietness of the HMMWV, while simultaneously protecting it from enemy action. In this arrangement, the scout worked with either a Bradley fighting vehicle or Abrams tank. The scout sought and identified targets through stealth. The more powerful vehicles provided overwatch for the scouts and engaged targets.<sup>26</sup>

The fielding of digital systems associated with Force XXI offered the promise of greater capability. The future battle command brigade and below (FBCB2) and the LRAS3 provided enhanced situational awareness and a greatly improved ability to identify enemy activities from afar. These systems permitted scout platoons to maneuver more effectively and observe enemy activity while reducing the risk of detection and destruction. However, fielding occurred slowly and came at a cost. In the Force XXI division design, for example, maneuver battalion scout platoon size shrank from ten to six vehicles. The lost vehicles helped to equip the newly created brigade reconnaissance troop (BRT). This unit filled a gap in reconnaissance capability that had long existed between the battalion and the division. Conceptually, the improved capability at the brigade level, coupled with LRAS3 and FBCB2 fielding at the battalion scout level, mitigated the downsizing. However, the smaller scout platoon could not provide the same degree of coverage or absorb the losses of the larger, 10-vehicle unit it replaced. Moreover, despite the new capabilities, the scout platoon remained highly vulnerable to chance encounters with enemy forces.<sup>27</sup>

### Transformation and the Global War on Terror

The onset of Army Transformation in 1999 triggered a new series of force structure changes intended to improve deployabil-



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ity and responsiveness. Part of these changes included reshaping the field force into modular brigade combat teams that could be tailored to meet different operational environments. This transition was still ongoing when Operation Iraqi Freedom began. Hence, many organizations went to war largely unchanged since Operation Desert Storm, including the heavy maneuver battalion scouts.

The HMMWV's poor survivability in Iraq led the Armor Center to host a General Officers' Reconnaissance Integrated Concept Team in 2005. This event brought force designers and combat commanders together to discuss various reconnaissance issues, including the scout's platform. In general, the attendees considered the HMMWV, whether up-armored or not, an inadequate scout vehicle. They desired a better platform and wanted scout platoons capable of aggressive reconnaissance even in the presence of a hostile force. Although stealth remained the preferred method of operations, the ability to fight for information received much greater support. The M1114 remained in service as a scout platform — but only through the absence of an alternate vehicle.<sup>28</sup>

The search for a replacement to the HMMWV followed. During the 2006 Current Forces Protection Initiative, an Army team reviewed various existing vehicles. The results helped shape the requirements for a new reconnaissance platform that would incorporate proven technology and design features. In particular, consideration was given to the use of a v-shaped chassis to improve mine resistance. However, concept development continued throughout the year without a new vehicle in sight, although considerable interest was shown in the Cougar and Buffalo armored trucks, made by Force Protection, Inc. These mine-resistant vehicles held the promise of better survivability against mines and other typical threats.<sup>29</sup>

Acquiring a HMMWV replacement required time, but combat operations overseas continued. Therefore, the Army began reconfiguring its scout platoons into a mix of five HMMWVs and three M3s. This arrangement permitted the operation of a separate command element of two HMMWVs and three scout sec-

tions, each including one HMMWV and one M3. Alternatively, the HMMWVs and M3s could be grouped into separate heavy and light sections. This platoon organization used platforms already in the field and retained the same 30-man personnel strength as prior configurations. It marked an improvement over the pure HMMWV platoon, which had proven too vulnerable to hostile activity. However, the mixed organization possessed only limited dismount capability. It offered less coverage than the 10-HMMWV scout platoon and less combat power than the M3 platoon.<sup>30</sup>

The new scout platoon organization marked the belated implementation of similar proposals repeatedly recommended since the 1980s. The intervening years witnessed two wars and numerous contingency deployments that underscored the limitations of the pure HMMWV scout platoon and the related danger of associating stealth with survivability. Interest in the HMMWV as a scout vehicle arose from its quietness, small size, and mobility. However, the inability to survive chance encounters with hostile forces or unruly crowds effectively nullified these qualities.

Perfect situational awareness — let alone situational understanding — is an illusion that has never existed. Clausewitz's friction of war remains very much a characteristic of information age military operations, particularly against an adaptive threat unconcerned with force protection measures or rules of engagement. No means exist to track every hostile combatant or pre-empt all attacks on friendly forces. In the current nonlinear operational environment, these realities ensure the likelihood of a sudden encounter with an IED or ambush.

To function in such circumstances, heavy maneuver battalion scouts require greater survivability. Stealth will characterize much of their activity, but during surprise encounters with hostile forces, the availability of more traditional ballistic protection and weaponry will ensure their survival and ability to continue their mission. Developing a scout platform requires a careful balance of survivability, lethality, mobility, sustainability, and stealth. In the HMMWV's case, mobility, sustainability, and stealth received great emphasis at the expense of platform survivability and lethality.

Determining the correct balance of qualities in any future scout vehicle must include a rigorous, objective analysis of historical and recent operational experiences. Modeling and simulation results must be assessed and understood from this real world frame of reference. No matter how sophisticated, modeling and simulation — including rotations at the combat training centers — cannot depict the full range of conditions in which scouts operate. At best, they provide an estimate of effectiveness that may not survive contact with the enemy.

The importance of the scout platoon to maneuver battalion operations makes such a broad and more critical analysis of potential platform capabilities imperative. The cost of not doing so is evident in the HMMWV scout platoon's story. This unit developed as a solution to an NTC trend. In retrospect, platform survivability did not receive sufficient attention before fielding began. Later, when operational experience suggested the HMMWV's unsuitability as a scout platform, alternative solutions — such as the mixed M3/HMMWV platoon — were left unexplored until recent combat operations made abandonment of the pure HMMWV scout platoon unavoidable. In the Balkans and again in Iraq, chance encounters on a nonlinear battlefield proved much more frequent than anticipated in the simulated field conditions initially used to justify the HMMWV's use as a scout platform.

Analysis of the experiences of jeep-mounted scouts in the 1940s and their abandonment in the post-World War II era should have led to a more critical appraisal of the HMMWV platoon in the 1980s. Instead, fielding of the organization continued, despite

growing criticism of its effectiveness in Somalia, the Balkans, and Iraq. Ironically, a World War II precedent also existed for the mix of combat and stealth capabilities found in the new scout platoon organization. More effective and realistic solutions to force design and platform problems are possible through greater attention to similar issues in the past. It remains to be seen if the past will indeed be used to develop better future systems or whether attractive concepts will be retained long after they have outlived their utility — such as the HMMWV scout platoons in the heavy maneuver battalions.



## Notes

<sup>1</sup>For a comprehensive review of maneuver battalion scout platoon organization, doctrine, and materiel from World War II through the 1980s, see Major (P) Craig S. Harju, Sr., "White Paper—A Study of the Maneuver Battalion Reconnaissance or Scout Platoon," 18 September 1989, U.S. Army Armor School, Fort Knox, KY. This item is available via the Defense Technical Information Center (DTIC), report number ADA214798.

<sup>2</sup>Ibid., pp. 78-80; U.S. Army Armor School, "Armor Reference Data, Special Text 17-1-1, Vol. I," Fort Knox, KY, 1981, p. 255.

<sup>3</sup>Anne W. Chapman, *The Origins and Development of the National Training Center 1976-1984*, Center of Military History, Washington, D.C., 1997, p. 107.

<sup>4</sup>Major John D. Rosenberger, "An Assessment of Reconnaissance and Counterreconnaissance Operations at the National Training Center," Fort Knox, KY, February 1987, pp. 1, 8, quotation from page 8.

<sup>5</sup>Ibid., pp. 8-9, 16.

<sup>6</sup>Lieutenant Colonel Thomas C. McCarthy, "U.S. Army Heavy Brigade Reconnaissance During Offensive Operations," School of Advanced Military Studies monograph, Fort Leavenworth, KS, 1994, pp. 18-19.

<sup>7</sup>Directorate of Combat Developments, U.S. Army Armor School, "Cavalry/Reconnaissance Net Assessment—Master Plan," Fort Knox, KY, 31 August 1988, pp. 2-10, 2-11.

<sup>8</sup>Major Barry Scribner, "HMMWVs and Scouts: Do They Mix?" *ARMOR*, July-August 1989, pp. 33-38.

<sup>9</sup>Directorate of Combat Developments, U.S. Army Armor School, "Proponent Evaluation Report for the Concept Evaluation of the Maneuver Battalion Scout Platoon," Fort Knox, KY, 12 March 1990, pp. 1-3, 13, quotation from p. 13. This document is available from DTIC, report number ADA224363.

<sup>10</sup>Ibid., pp. 16, 32-34, quotation from p. 16. The use of motorcycles within the platoon was found to have considerable value, but they did not become part of the table of organization and equipment. Safety and training issues surrounded motorcycle use. In addition, adopting the motorcycle would have required a new acquisition effort.

<sup>11</sup>U.S. Army Armor Center, "Desert Shield and Desert Storm Emerging Observations," (FOUO), Fort Knox, KY, 7 October 1991, p. 1-4; First Lieutenant (P) Charles W. Gameros Jr., "Scout HMMWVs and Bradley CFVs: Gulf War Provides a Comparison of Scout Vehicles and MTOEs," *ARMOR*, September-October 1991, pp. 21-25.

<sup>12</sup>"Desert Shield and Desert Storm Emerging Observations," (FOUO), p. 4-7.

<sup>13</sup>McCarthy, pp. 24-25.

<sup>14</sup>"Desert Shield and Desert Storm Emerging Observations," (FOUO), pp. 4-7, 4-8.

<sup>15</sup>McCarthy, p. 31.

<sup>16</sup>Ibid., pp. 19-24.

<sup>17</sup>McCarthy, pp. 27-29.

<sup>18</sup>U.S. Army Field Manual (FM) 17-98, *Scout Platoon*, U.S. Government Printing Office (GPO), Washington, D.C., 1994, p. 3-14.

<sup>19</sup>Martin Goldsmith, *Battalion Reconnaissance Operations at the National Training Center*, RAND, Santa Monica, CA, 1996, pp. 12-14, quotation from p. 14.

<sup>20</sup>Directorate of Force Development, U.S. Army Armor Center, "Reconnaissance Update," Briefing, 1998; "Future Scout and Cavalry System (FSCS), Tactical Reconnaissance Armored Combat Equipment Requirement (TRACER), Armored Scout and Reconnaissance Vehicle (ASRV)," internet article, accessed 6 February 2007 at <http://www.globalsecurity.org/military/systems/ground/fscs.htm>.

<sup>21</sup>Directorate of Force Development, "Reconnaissance Update."

<sup>22</sup>Lieutenant Colonel John C. Woznick, "The Scout Vehicle," *ARMOR*, September-October 1994, pp. 31-34.

<sup>23</sup>First Lieutenant Wayne T. Westgaard, "Will the New Brigade Reconnaissance Troop Be Adequately Protected?," *ARMOR*, March-April 1999, pp. 27-29.

<sup>24</sup>Lieutenant Colonel Michael Prevou, "HMMWVs Lack the Firepower and Protection for Bosnia Role," *ARMOR*, January-February 1998, pp. 36, 56.

<sup>25</sup>Lieutenant Colonel Henry M. St-Pierre and First Lieutenant Jamie E. Warder, "TEAM RECON: A New Approach to Armored TF Reconnaissance," *ARMOR*, March-April 1999, pp. 24-26, 29.

<sup>26</sup>This teaming of light scouts and heavier platforms dates back to World War II. Mechanized cavalry units were organized accordingly, while maneuver battalion scout platoons developed an ad hoc teaming by mixing tanks with jeep scouts.

<sup>27</sup>Directorate of Force Development, "Reconnaissance Update;" Headquarters Department of the Army and U.S. Army Armor Center and Fort Knox, "FKSM 71-2 (2005): The Armored and Mechanized Infantry Battalion Task Force (Coordinating Draft)," Fort Knox, KY, 1 November 1999, pp. 1-2, 1-5, 1-6, 1-7.

<sup>28</sup>General Officers' Reconnaissance ICT, Notes, 24-25 August 2005, Armor Branch Archives.

<sup>29</sup>David Wood, "Better Armor Lacking For New Troops in Iraq," *Baltimore Sun*, 10 January 2007.

<sup>30</sup>U.S. Army Armor Center, FKSM 71-8: *Armor/Cavalry Reference Data*, Fort Knox, KY, August 2005, pp. A-16, A-17.

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