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Battalion Reconnaissance Operations at the National Training Center

Martin Goldsmith

Arroyo Center

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Preface

The Arroyo Center has conducted a program of research on tactical operations at the National Training Center (NTC) over the past ten years. In 1987 the project made a detailed study of scouting operations at the battalion task force level. Those results contributed to a number of changes instituted by the Army to overcome widely perceived problems that adversely affected battlefield outcomes.

In 1993, Lieutenant General Paul Funk, then commandant of the U.S. Army Armor School at Fort Knox, requested that the Arroyo NTC project revisit the topic of scout operations. His purpose was to ascertain if the changes made by the Army had indeed improved scouting performance. The field study was carried out at the NTC over the ensuing two years, and is the topic of this report.

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Contents

Preface iii
Figures and Tables vii
Summary ix
Acknowledgments xi
1. INTRODUCTION 1
2. DATA INSTRUMENTS 4
3. FIELD DATA 9
4. ANALYSIS 12
5. CONCLUSIONS 15
References 17

Figures

1. Recon Evaluation Card 5
2. Scout Platoon Evaluation Card (front) 6
3. Scout Platoon Evaluation Card (back) 7

Table

1. Scout Task Success Rate 10

Summary

In a prior study of task force scout operations at the NTC, the Arroyo Center made a number of significant findings. We found that the reconnaissance function was deficient in a majority of battles, and that the reconnaissance deficiency could be correlated with failure in offensive operations. Problems included inefficient use of time, failure to use available assets, poor scouting techniques, and inadequate supervision by the battalion commander and staff.

These problems were found to result from doctrinal shortcomings, insufficient training of key personnel, and equipment deficiencies. The study went on to make specific recommendations to overcome these difficulties. As a consequence of the study, as well as its own investigations, the Army made a number of important changes to doctrine, training, and equipment for the scout elements of heavy battalions.

At the request of a former commandant of the U.S. Army Armor School, the Arroyo Center NTC project conducted a brief relook study of task force scout operations at the NTC. The purpose was to determine if the "fixes" the Army put in place were successful in overcoming former problems. The study examined the performance of ten battalion task forces over a period of about one year.

The means of data collection were card questionnaires filled out by observer/controllers (O/Cs) who are responsible for the training of scout and headquarters staff elements. The data are concerned with (a) scout platoon operations and (b) conduct of the balance of the intelligence operating system. One data card dealt with such matters as the readiness of scout vehicles, accomplishment of assigned tasks, and contact with the enemy. The second card examined factors in the reconnaissance planning process and the utilization of battlefield information by the task force commander and staff.

The results derived from the dataset indicate that there has been a marked improvement in scout platoon operations. First, the scouts are better equipped, and second, they seem better able to accomplish their mission. It was noted that they are able, on average, to accomplish over half of their assigned tasks. However, survivability remains a critical problem. On the other hand, it was noted that task forces continue to experience difficulty in (a) planning their reconnaissance operations and (b) utilizing the battlefield information products.

This is attributed to a lack of detail in planning, failure to use all available assets, and neglecting to incorporate scout information into updated plans and ongoing operations. These command and control problems are similar to those uncovered in other Arroyo studies conducted at the NTC.

It is concluded that while changes instituted by the Army to improve scout operations have been partially successful, a similar program of change is necessary in training dealing with battalion staff and command operations.

Acknowledgments

The author is grateful to the members of the mechanized infantry and armor battalion training teams at the NTC, who both contributed to the formulation of the data cards and collected all the information used in this study. Interpretation of the data is, of course, solely the responsibility of the author.

1. Introduction

In 1987, the Arroyo Center published a study of tactical reconnaissance as observed at the National Training Center (NTC) (Goldsmith and Hodges, 1987). Based in part on that study, the Army made a number of changes to improve tactical reconnaissance at the battalion task force level. More recently, a former commandant of the U.S. Army Armor School asked the Arroyo Center to reexamine the conduct of reconnaissance at the NTC to determine if those changes were successful. The purpose of the present study was to conduct that reexamination.

A major finding of the original study was that there was a direct correlation between adequate reconnaissance and success in offensive operations. There is no reason to doubt the continued validity of that conclusion, and that point has not been included in the present work.

Other findings of the 1987 study included the following:

1. Reconnaissance planning and preparation were often (half the time) not completed in a timely fashion.
2. There was insufficient time in the NTC scenario to accomplish necessary reconnaissance for deliberate attacks.
3. All the assets potentially available to the task force reconnaissance effort were not used.
4. Scout vehicles had a poor rate of availability.
5. Communication links between scouts and task force were often inadequate.
6. Less than half the necessary reconnaissance tasks were usually accomplished.

Additionally,

7. Scouts often engaged the enemy, and on average about half the scouts died in each battle.
8. Scout dismounted operations were often inadequate.

Findings related to the underlying causes of these shortcomings included the following:

9. Doctrinal manuals were inadequately addressing reconnaissance issues and methods.
10. Military Intelligence (MI) S-2 officers were often too junior and lacked appropriate tactical training.
11. Scout leaders received no special training.
12. Scout training in reconnaissance techniques was inadequate.
13. Scouts required added surveillance equipment.
14. Stealthier and more appropriately equipped scout vehicles were necessary.

These findings led to some specific recommendations:

a. Particular improvements in task force, military intelligence, and scout platoon doctrine.
b. A special course for scout platoon leaders.
c. A course for S-2s.
d. Experimental addition of HMMWVs or other specialized scout vehicles to task force scout platoons.
e. Added scout equipment, to include night vision devices, radio retransmission sets, and position/location equipment.
f. Added emphasis on reconnaissance training, to include training at the NTC.

The Army had also been conducting examinations of reconnaissance and the intelligence operating system at the task force level, and as a consequence undertook many changes. These changes and additions included:

- Institution of a scout platoon leaders course at Fort Knox.
- Two revisions of FM 17-98, *The Scout Platoon.*
- Added doctrinal treatment of reconnaissance with the publication of FM 71-123.
- Expansion of the treatment of tactical reconnaissance in MI doctrine.
- Added emphasis on S-2 training at Fort Huachuca.
- Correction of MI company-grade officer shortages.
- Added emphasis on reconnaissance in the precommand course at Fort Leavenworth.
- Revision of scenarios at the NTC to provide more opportunity for reconnaissance.

- Change from tracked to wheeled (HMMWV) vehicles for scout platoons.
- Added night vision and position/location equipment for scouts.

To determine if these changes accomplished the desired result, we undertook another field investigation at the NTC to probe into the operation of the reconnaissance forces at the task force level. The data instruments (field questionnaires) are reviewed in Section 2, and the results emerging from the data are presented in Section 3. An analysis of the findings is included in Section 4, with conclusions offered in the final section.

2. Data Instruments

Two data cards were filled out by the observer/controller (O/C) teams for each battle in our collection plan. These cards separately examined the planning and execution of reconnaissance by the battalion headquarters, and the conduct of the reconnaissance by the scout platoon and other assets assigned to the mission. Reproductions of the cards are shown in Figures 1, 2, and 3.

The **Recon Evaluation** card was filled out by the O/C counterpart of the battalion S-3 or S-2. They are in the best position to evaluate the task force (TF) staff's conduct of the intelligence battlefield operating system. The questions are specifically directed to the interface between the staff and the reconnaissance elements. The intent of the questions is either self-evident or was explained to the data takers in the following way.

In the prior examination of scouting, failure of communication links was very common, and we wished to know if changes had been made. The question on "commo" refers to technical adequacy—were the scout net and/or other necessary nets able to pass message traffic as necessary?

The questions on NAI (named areas of interest, a doctrinal term) are meant to determine if the scouts were given too many or too few (like zero) specific tasks, and how many tasks were given to other reconnaissance assets. These data could be obtained by the O/Cs from the reconnaissance and surveillance (R&S) matrix, for example.

In the earlier study, a significant finding was that time necessary for reconnaissance was wasted in the planning and preparation process. Here the planning questions are clearly judgmental. The phrase "on time" means early enough so that the scouts might reasonably be expected to complete their tasks in time to support the TF mission.

"Assets ready on time?" asks if the scouts themselves were prepared (including logistics (CSS functions)) to start their mission when required.

We then wanted to know whether the scouts were sent out as early as is reasonable for the mission, or if they were held back or otherwise caused to waste time that would have been useful for their mission.

RECON EVALUATION (by O/C 09, 03)

TASK FORCE Armor_____ Mech_____

DATE_____ MISSION MTC___ HA___ DA___ DIS___ Other_____

ASSETS TASKED (Y,N) Scouts____ Aviation____ FOs____ Infantry____

EW____ GSR____ Engineers____

COMMO adequate_____, inadequate_____; how accomplished (relay,

retrans, HF, etc)_____

How many NAI given to scouts?_____ How many reported on?_____

How many NAI given to others?_____

R & S Plan		Yes	No
based on adequate template?			
ready on time?			
sufficiently specific?			
Assets ready on time?			
Scouts sent at earliest appropriate time?			
Were recon assets coordinated			
during preparation?			
during recon?			
during battle?			
Before battle, were scout reports	received?		
	useful?		
	used?		
During battle, were scout reports	received?		
	useful?		
	used?		

Arroyo Center 7-8-93

Figure 1—Recon Evaluation Card

SCOUT PLATOON EVALUATION (by O/C 20)

TASK FORCE Armor_____ Mech_____

DATE_____ MISSION MTC____ HA____ DA____ DIS____ Other____

CONFIGURATION (number available) M-3____ HMMWV____ M/C____

NOD____ Thermals____ Stingers____ Other_____

Other assets attached _____

ROUNDS FIRED 25mm____ COAX____ TOW____ Mk 19____

LAW____ Dragon____ Stinger____ M-60____ M16____

DESTROYED ____IFV by _____

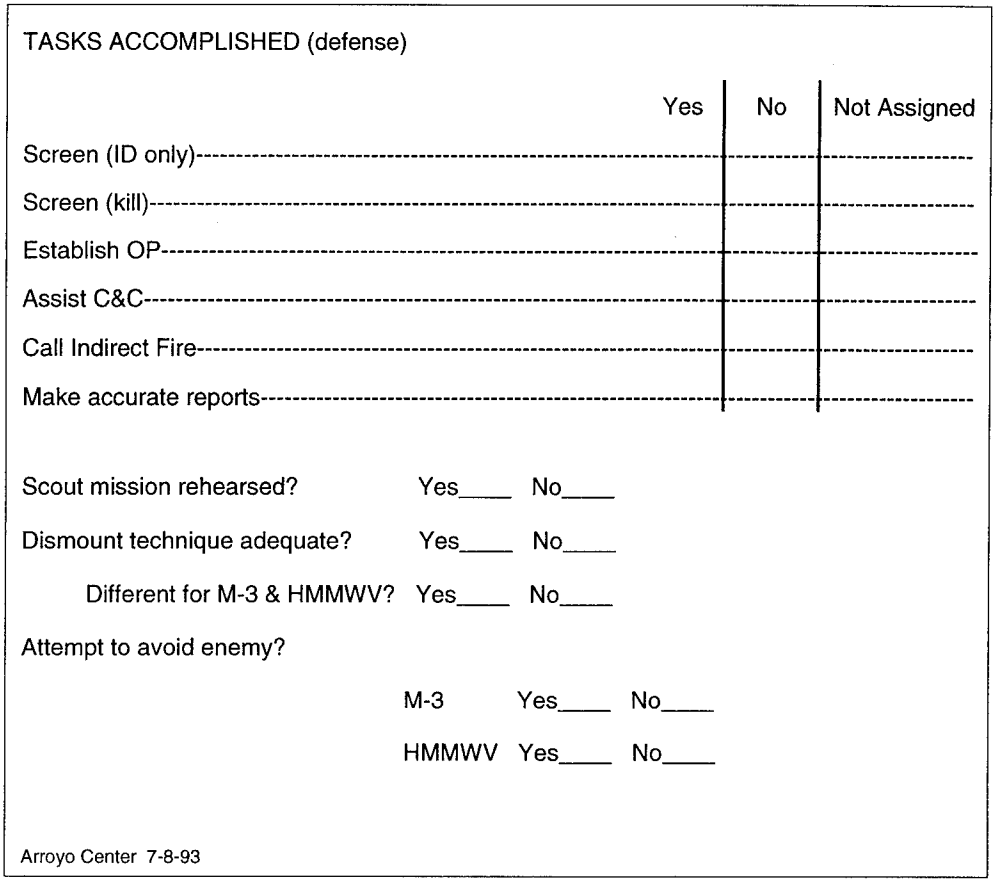
(by T-72, BMP, AT5, HIND, RPG BRDM, Arty, Fratricide) ____HMMWV by _____

____M/C by _____

____OP by _____

TASKS ACCOMPLISHED (offense) (use B for M-3, H for HMMWV)	Yes	No	Not Assigned
Clear Intermediate Objectives			
Infiltrate Objective (OPFOR)			
OP's Established			
Locate OPFOR position			
Locate Obstacles			
Mark Bypasses			
Accurate Reports (pre-battle)			
Accurate Reports (during battle)			
Locate OPFOR Security			
Recon Mounted Route			
Recon Dismounted Route			
Assist TF C&C			
Call Indirect Fires			

Figure 2—Scout Platoon Evaluation Card (front)


TASKS ACCOMPLISHED (defense)

	Yes	No	Not Assigned
Screen (ID only)			
Screen (kill)			
Establish OP			
Assist C&C			
Call Indirect Fire			
Make accurate reports			

Scout mission rehearsed? Yes____ No____

Dismount technique adequate? Yes____ No____

Different for M-3 & HMMWV? Yes____ No____

Attempt to avoid enemy?

M-3 Yes____ No____

HMMWV Yes____ No____

Arroyo Center 7-8-93

Figure 3—Scout Platoon Evaluation Card (back)

In an unpublished field study recently completed of brigade operations, we found that coordination of the reconnaissance assets at brigade level was often incomplete. Even though task forces are apt to have fewer assets to control (e.g., aviation, COLTs (combat observation and lasing teams), MI sensors), the coordination function is no less necessary. To clarify the phases used in the question on coordination of assets, consider "preparation" to include the period for planning and troop-leading procedures, before the reconnaissance assets are deployed. "During recon" means the period after scout deployment, but before offensive LD (start of tactical movement). In the case of defense, it means the period after the time opposing force (OPFOR) elements enter the defensive sector but before engagement of the main bodies.

The desired end result of reconnaissance activity is reports to the headquarters and the use of those reports in the planning and conduct of the TF mission. The questions about scout reports are intended to separate three distinct issues: First, were scout reports even received at the designated headquarters location?

Second, were these reports useful in nature, even if no use was made of them? Third, if they were received and useful, were they indeed used?

The second card, **Scout Platoon Evaluation**, was to be prepared by O/C 20, who is responsible for the training of the scout platoon.

While most scout platoons were expected to be equipped with HMMWVs in a ten-vehicle configuration, some may not be. Therefore, we asked for some of the details of their equipment and also asked the O/Cs to note if other significant assets showed up. We were also concerned with the availability (readiness) of the scout vehicles, which was a serious issue in the previous study.

The questions on rounds fired and mode of destruction (if scouts are in fact killed) were meant to gain a feel for how often the scouts can elude discovery and how often stealth fails. If conditions were unusual, we also asked for notes on when and how the scouts were lost.

We wanted to know how successful the scouts were in accomplishing their mission, and we divided it into separate tasks. Some tasks may not always be appropriate for scouts but are sometimes given anyway (clearing intermediate objectives is an example). Were the scouts able to infiltrate or observe the OPFOR objective, that is, the OPFOR defensive complex? Were OPFOR positions and obstacles located, accurately enough to support a detailed plan of attack? Were scout reports accurate as to size, composition, disposition, and location of enemy forces? Did the scouts find the OPFOR security elements (before the security elements found them)? Through observation, were the scouts able to assist the TF by directing forces toward desired routes or locations during TF movement?

In the defense, were the scouts successful in screening, either as seekers or as killers? Again, could they aid the TF during battle in command and control by their observations of the battlefield? Did they make situation reports that aided understanding of the enemy and friendly situation?

Miscellaneous questions included inquiry as to the frequency of dismounting and the adequacy of dismounted techniques. We also asked whether there were differences in dismounted operations between HMMWV and M-3 scouts, if both were present. We were interested in knowing if the scouts attempted to avoid engaging the enemy (and whether there were differences between HMMWV and M-3 scouts if both were present). The success of their attempts would be evident from earlier questions on scout losses.

The results obtained from these data cards are summarized in the next section.

3. Field Data

During 1993 and 1994, the data cards discussed in the previous section were employed during a series of brigade rotations. In all, 10 mechanized infantry or armor battalion task forces were included in the dataset. Omitted from the data were cases where the rotational unit was divisional or regimental cavalry, or a reserve organization. Data for 41 battles were recorded, divided into 15 movements-to-contact/hasty attack (MTC/HA), 16 deliberate attacks (DA), and 10 defenses-in-sector (DIS). Below we summarize the data. Data analysis is presented in Section 4.

The number of assets tasked for reconnaissance, in addition to the scouts, averaged 1.2. The most common asset included was the GSRs from the divisional military intelligence unit. The choice of other assets was scattered. The O/Cs considered communications links between the scout platoon and the task force to be adequate in 88 percent of the battles.

We have divided the responses concerning the number of NAI assigned to the scouts into two categories—reasonable or not reasonable. This is subjective, of course. FM 19-78, *The Scout Platoon,* states that a ten-HMMWV scout platoon can maintain three observation posts (OPs) over an extended period, and up to eight for short periods. As most OPs can usually keep only one NAI under surveillance, we consider the assignment of zero NAI as unreasonable as the assignment of ten. In most cases, a scout platoon of three or four sections can handle perhaps three to six NAI. Larger numbers tend to strain their capability in most cases. With these admittedly loose criteria, we judged that the scouts were given a reasonable number of NAI in 54 percent of the cases.

While there always appeared to be a reconnaissance and surveillance (R&S) plan prepared, only in 44 percent of cases were they judged to be based on an adequate situational template, prepared as part of the IPB (intelligence preparation of the battlefield) process. In 85 percent of cases, the plan was produced in a timely fashion, however. The O/Cs felt that the R&S plans were inadequately specific for 66 percent of the battles.

The scouts were sent out in a timely fashion 67 percent of the time, but the various reconnaissance assets were not coordinated in 63 percent of cases.

In the important matter of scout reports received, we examined three factors separately: Were they received? Were they useful? And were they used? Prebattle reports were received 90 percent of the time. Of those received, 70 percent were judged useful, and of those, 65 percent were used. These percentages are cumulative, however; the bottom line is that in only 41 percent of battles were quality prebattle scout reports available and used. In the cases of reports during battle, scout reports were received in 83 percent of the cases. Seventy percent were judged useful, and of those, 65 percent were used. Again, however, this means that in only 38 percent of battles were scout reports used as the battle progressed. The fact that useful scout reports are not used is a troubling finding and will be considered further in Section 4. Our present data do not reveal a probable cause.

The data reported above deal largely with the relationship of the scouts to the task force. The following data are concerned with the operations of the scout platoon itself. The first point covered was ammunition expenditure by the scouts. Precise numbers, or averages, are not of importance. What does seem important is that in only one case did ammo expenditure indicate that scouts became heavily engaged. Seven units used HMMWV, while three used M3 (one supplemented the M3s with a HMMWV). The number of scout vehicles employed in any given battle usually varied from eight to ten HMMWVs or five or six M3 CFVs. The data showed that on average, 3.9 HMMWVs died in a task force mission, while the M3s averaged 3.0 losses per mission. We can say that roughly half the scouts are killed in either case, and our small database did not permit us to try to differentiate among classes of mission. This high loss rate is of great concern.

To measure scouting success, we recorded how many tasks the scouts accomplished, out of the number they were assigned. In this case we did differentiate between the three classes of battle and between HMMWV- and M3-equipped units. The data are shown in Table 1.

Table 1

Scout Task Success Rate
(Accomplishment of assigned tasks)

Battle Type	HMMWV Platoons	M3 Platoons
Movement-to-contact/hasty attack	54%	59%
Deliberate attack	46%	60%
Defense-in-sector	66%	77%

We also asked a few questions about how the scouts went about their mission. One question concerned the conduct of rehearsals. The O/Cs reported that in only 18 percent of cases were rehearsals conducted. They also judged the scout dismounted techniques to be adequate in only 38 percent of the battles. Turning to the important issue of attempting to avoid the enemy (the scout death rate reported above indicates that they were often unsuccessful in the attempt), the O/Cs felt that in 74 percent of cases, HMMWV scouts attempted to avoid, while the rate for M3 scouts was 86 percent. In all cases, the reader should bear in mind that this is a small dataset, and that small differences in numbers reported by percentages are of little significance. The conclusions to be drawn from the investigation should remain limited. These raw numbers will be analyzed in the next section.

4. Analysis

The original study of reconnaissance contained the conclusion that many task forces did not seem to place high priority on the need for it. This was manifest in several indirect ways. We have looked at the data for the present study to determine if this situation has improved (again using indirect indicators).

On the positive side, we find that the mission availability of scout equipment has increased. This is undoubtedly due in part to the replacement of ITVs and APCs with newer Bradleys and HMMWVs, but the availability of even the M-3s has markedly increased, presumably owing to added attention to the maintenance needs of the scouts. Another positive indicator is the improved adequacy of scout communication nets. While often mentioned as a deficiency in 1987, the commo links are now judged adequate 88 percent of the time. This has been brought about not by new equipment, but by assignment of existing divisional assets such as re-trans, directional antennae, and relay stations, and by better commo planning, according to O/Cs.

The issue of lack of timeliness of reconnaissance planning, preparation, and initiation was significant in the former study, with late plans and late asset availability being recorded over half the time in deliberate attacks. Today, however, the record has improved considerably, with the scouts departing in a timely fashion about two-thirds of the time. We cannot separate how much of this improvement is due to better TF operations, and how much has been made possible by the inclusion of added planning and preparation time for deliberate attacks in the NTC scenarios.

The data have some negative indicators concerning the conduct of the overall intelligence operating system. This includes the fact that TFs still do not make adequate use of potentially productive assets in conducting the reconnaissance. These might include infantry, aviation, fire-support observers, engineers, and other organic and nonorganic assets. This can be important for gaining redundancy, an important factor considering the high loss rate for scouts. This fact must be placed against the finding that the scouts are given reasonable assignments (in terms of numbers of NAI) only about half the time. The O/Cs judged the R&S plans to lack specificity two-thirds of the time, and to be based on an adequate template less than half the time. Another command and staff planning deficiency is that reconnaissance assets were not coordinated 63 percent of the time. This is similar to unpublished RAND data for brigade intelligence

operations, where brigade and task force reconnaissance assets were coordinated only about half the time.

Our data also show that even *useful* scout reports are incorporated into task force planning and operations less than two-thirds of the time. This failure is difficult to understand, and our data offer no definitive causes.[1] The problem could be one of simple overload of the headquarters staff, or as complex as lack of understanding of the importance of accurate battlefield information. The situation overall is worse, considering that useful reports are not even received in many cases. The result is that for both planning and battle command purposes, scouting information is available and *used* in only about 40 percent of all battles. Moreover, the O/Cs seldom note that plans or actions are modified to reflect shortfalls in intelligence. This strongly suggests a frequent command and staff indifference to the true nature of the battle situation and the value of reconnaissance.

These findings are consistent with those of another recently completed RAND study of command and control as carried out at the NTC (Grossman, 1994). There it was found that TF plans often lacked specificity and detail. Our reconnaissance-associated findings are simply another manifestation of continuing problems with battle staff training.

Turning now to some details of the scout platoon operations themselves, we found, as in the prior study of scout platoons, that the scouts use very little ammunition. Again as before, they continue to be destroyed by the OPFOR at an average rate of nearly half the vehicles in the platoon each mission. However, the scouts were able to accomplish their tasks at a rate approaching 60 percent overall. This is in contrast to the prior study, where the success rate for scout tasks was scarcely half of that figure. Because the data taken were different in format, more detailed comparisons are not possible and are not needed for the present purpose.

We might suspect an inconsistency at this point, with the destruction rate of scouts being fairly unchanged while the reconnaissance success rate is markedly higher. Two factors are believed to account for the change. First, the HMMWV scout platoons are larger to begin with, and have good vehicle availability, while the M-3 platoons are showing much-improved availability. Thus, there are more assets to be employed. Then, our O/C reports indicate that the scouts are

[1]Other RAND studies of task force command and control (e.g., Grossman, 1994) indicate that consideration of both enemy and friendly alternative courses of action is frequently overlooked. This suggests that there is often a mindset to follow a developed plan, regardless of later information that may develop.

surviving longer into their mission. In 1987 it was common for scouts to be destroyed during their first night of deployment. Now it is more common for the scouts to be discovered by the OPFOR during daylight hours after the platoon has already been able to accomplish many of its tasks in the previous night. Thus the issue of scout survivability remains unresolved. Clearly neither vehicle currently in use is optimum for scouting. Either a new vehicle or a mix of vehicles may be a better solution. Daytime survivability is a difficult problem, and may extend into night operations as enemy capabilities improve.

Both their survival and their capability have been improved by the addition of night vision devices to the scout TO&E. In 1987 this was reported as a major shortcoming; the data today indicate a much improved situation. It was noted in the data, however, that considerable variation in scout equipment exists between units. This indicates that commanders are not satisfied with the standard TO&E for scouts, and are using other assets to improve the situation.

Other important aspects of scout platoon operations are indicated in the data. For example, in less than one-fifth of cases did the scout platoon conduct rehearsals. This is in spite of the great emphasis placed on rehearsals throughout the doctrinal literature. The O/Cs also report that dismounted techniques are inadequate in over three-fifths of the battles. They reported, however, that in spite of the high loss rate for the scouts, they did try to avoid the enemy in four-fifths of cases. It is clear that some of the lessons identified from prior experience and analysis have been learned, while some have not yet been absorbed.

5. Conclusions

The question to be answered by this investigation was whether reconnaissance and intelligence operations at the battalion task force level had shown improvement since a prior RAND study conducted in 1987. With the data and observations reported in Sections 3 and 4, it is reasonable to conclude that scout platoon operations have improved in several ways. First, the scouts are better equipped, and apparently are receiving better CSS support from the task force. Most of the scout leaders have received special training, which seems to reflect itself in more efficient operations. The scouts are paying greater attention to avoiding the enemy, but the loss rate for scouts remains high (although not generally as high as is reported in take-home packages (THPs) for task force combat vehicles in general). By our current data, the scouts are usually accomplishing more of their mission than was evident in the prior study.

The issue of scout survivability remains unsolved. Either a new vehicle, or mix of vehicles, plus changes in the doctrine of employment are indicated. Our present data do not yield the detailed information to support specific improvements, but special investigations at the CTCs might do so. In the interim, until a more permanent solution can be implemented, the Army should review the work-arounds being employed by individual units as a means of improving scout TO&E using the existing asset stockpile.

In the prior study, a definite deficiency was noted in the experience and training level of task force S-2s. That problem is less today, with nearly all S-2s being MI captains, and with the greater emphasis on S-2 matters at the MI basic and advanced courses.

The greatest problem remains with battle staff operations. A separate RAND study at the NTC has shown many shortcomings in task force command and control functions, both in the planning and execution of battles. This is reflected in the present study, where lack of planning detail and specificity plague the intelligence system. Additionally, staffs exhibit an inability to make proper use of the intelligence information they do receive.

In our prior study, we found it possible to point out specific deficiencies in the training offered to scout leaders on the one hand, and S-2 officers on the other. Significant improvements have been made in those areas. At that time, and also at this time, we are unable to point out the specific courses or even schools that

require remediation to improve the battle staff problem. Our data suggest that the formal Army education system does not prepare battalion and brigade command and staff officers adequately for the tasks of managing the reconnaissance activities of their units or responding to battlefield information from various sources. We suspect that the problems with battalion and brigade staff and command functions is that there is no specific course or school directed at that tactical level of operation, at an appropriate point in an officer's career development.

Our reasoning is that the Officer Advanced Course (OAC) is directed toward training senior lieutenants or junior captains to be company commanders and junior battalion staff officers. These officers are not yet sufficiently experienced to absorb the tactical subtleties necessary for senior battalion or brigade staff. The next course is Combined Arms and Services Staff School. It is our understanding that this program does not have the tactical intensity necessary to overcome the deficiencies we see in the field. Later in their progression, officers attend Command and General Staff College (CGSC). There the emphasis is on higher levels of organization, such as corps and division. The only formal course that addresses the all-important brigade and battalion leadership training is the short precommand course for officers designated for command. This course does not include even the senior staff officers. Thus, officers who rise to senior staff and command have had their last intensive schoolhouse training in brigade and battalion level tactics when they were junior company-grade officers in the OAC, the intent of which is to prepare officers for company command.

If this hypothesis is correct, a fairly substantial structural change will be necessary in the Army training program to overcome the deficiency. For example, the thrust of CGSC may have to be redirected to include the needs of brigade and battalion. On the other hand, it may be preferable to institute a program separate from, and in addition to, present training, e.g., a special course designed for officers who are to be assigned as S-2s or S-3s. However, some will argue that the deficiencies observed in mock battle at the NTC are not failures of the schoolhouse but of home station training. But if our hypothesis is valid, the trainers in the chain of command who conduct home station exercises have themselves not been adequately trained to be tactical trainers. The results of this study and of other RAND studies at the NTC clearly indicate that this is a pressing problem for the Army.

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