

CHAPTER 4

TACTICS AND OPERATIONS

From an operational standpoint, the first lesson of the war is that combined arms operations eventually solve everything. Indeed the ability to conduct such operations is the true test of a modern army. It took the Iraqis some time to perfect the combined arms approach, and they did not display confidence in this style of fighting until Karbala V. From their performance in that battle—and from their operations the following year—we have concluded that they have made the transition from unsupported armor assaults to integrated combat power.³⁸

Some justification exists for the Iraqis' employment of single arms in the war's early stages. Since they had a great many tanks but suffered from a fundamental three-to-one population imbalance, their normal first reaction to an Iranian attack was to use their single strongest asset, large and medium armor units. However, the Iranians shrewdly chose to mount their major operations on terrain where the Iraqis' armor would be at a disadvantage. In marshes or mountains, such elements were greatly restricted, and fanatical Iranians armed with RPGs could neutralize them easily.³⁹

The "dilution factor" also contributed to the delay in developing combined arms units and operations. Iraq's army expanded several times over the 8 years of warfare; in the end it was five times the size it was when the war began. This constant ratcheting up in size affected the ability of units to perform competently as combined arms teams. In the normal process of training, individual proficiency comes first, followed by crew proficiency, followed by combined arms team proficiency.⁴⁰ In the Iraqi Army the progression was continually being short circuited as units were urgently needed at the front before their training was completed. (See Chapter 3.)

A third probable explanation of why it took the Iraqis so long to adopt combined arms tactics was the aforementioned factor of limited manpower. Effective combined arms tactics inevitably expose infantry. Until one has confidence in the synergy of the system—and thus comes to believe that exposing the infantry is actually the best way to protect it—one is caught in a dilemma. As long as keeping casualties low is the governing criterion for combat operations, it will be difficult to make the leap of faith into combined arms tactics that will actually result in lower casualties. For the Iraqis, holding down casualties was the dominant concern throughout the first few years of the war.

With these constraints, it is remarkable that the Iraqi Army made the transition to combined arms as effectively as it did. It is unlikely that it would have occurred at all had not the professional army leadership understood the advantages of combined arms and fought to develop the necessary training.

The final campaign represents the perfection of the Iraqi attempt to develop combined arms practices. In raising a new army with which to execute this offensive, the Iraqis did not have to reorient a force which had 7 years' experience largely in defensive operations. Instead, they were able, in effect, to start from scratch, taking fresh recruits and training them in the required doctrine. These new forces were the beneficiaries of tested training techniques, experienced cadres, and especially of training time. They were able to complete the entire cycle of training up to and including brigade level exercises. As they began operational training for the final campaign, their use of mock-ups—upon which entire divisions trained repeatedly—was highly effective.⁴¹ These final training exercises validate the virtue of training on "real ground" for solving the problems of synchronization of movement and fire—problems evident in our own forces at the National Training Center.

Admittedly, the battles of the final campaign had a certain drill-like quality about them since the Iranian Army was reduced to a hollow shell. The fact remains, however, that the

operations were an astonishing success, achieving all the stated objectives within extraordinarily short timeframes. The forces involved then rapidly regrouped and began practicing the next operation. One cannot help but recall Vegetius' observations on the Roman army, that their drills were like bloodless combats, their battles like bloody drills.

Close Air Support. The Iraqis were roundly criticized early in the war for not integrating close air support. For reasons perhaps best articulated by Major Ronald Bergquist in *The Role of Airpower in the Iran-Iraq War*, the Iraqis did not have or make the commitment to a close air support system.⁴² Shortly after the war began, however, the Iranians began employing helicopters in the close air role. Not long after the Iraqis followed suit; the American-style Iranian helicopter interventions had obviously made an impression. Helicopters became the Iraqi Army's close air arm.⁴³

The integration of this element into the combined arms team took time, however, and for a while the Iraqis used helicopters in a way Westerners would not expect, employing them as indirect fire assets. In this maneuver, rocket-loaded helicopters would fly to positions behind the front lines, orient on the target, pitch the nose of the helicopter up and launch.⁴⁴ This is a variation of some ideas that have existed in the American artillery and helicopter communities for some time. The practice is unusual, however, and probably not too efficient, except for providing area fire. In this sense it was reasonably effective against troops in assembly areas or in large attack formations such as those presented by the infamous human wave attacks. In addition, the technique undoubtedly has some value as a form of harassing and interdiction fire.

While we cannot be certain, it appears that by about 1985 the Iraqis began employing their helicopter assets in a more conventional role. During 1988, the "brave knights" of the helicopter force were cited in the daily war communiques as making a certain number of sorties along with the "hawks" of the Iraqi Air Force.⁴⁵

Estimates are that each side lost 250 helicopters in the war. The bulk of the losses were to the Soviet ZSU 23-4 23mm system.⁴⁶ There has been only limited discussion of the effectiveness of attack helicopters in their various roles. Evidence exists that the Iraqis used helicopters as chemical rocket delivery platforms. What type munitions were employed is uncertain, but it would most likely have been mustard gas.

Command and Control. The biggest mystery of the war is the behavior of the Iraqi command echelon. In its opening operations in 1980, Iraq's army moved as if it were a puppet on a string.⁴⁷ In the closing campaign of 1988, conversely it showed remarkable dash and flexibility.

Why was it so wooden in the earlier operations, only to loosen up later? The answer may lie in part with the changing composition of the officer corps. Iraq's army always had a small but solid cadre of well-trained officers. Indeed, the officer corps' roots go back to the Ottoman Turkish army, which was trained by officers from Kaiser Wilhelm's Imperial German Army. Then, when the British occupied Iraq, Iraqis trained at British schools and, under the Iraqi Republic, at schools in India, the Soviet Union, and Jordan. The General Staff does not, however, appear to have aligned its thinking with any one system although British organizational systems are evident.

When the Ba'th took power, many Iraqis became officers on the strength of their Ba'th Party credentials. In the first days of the war these "hacks" certainly caused problems, but the crucible of war assured their departure by one means or another within about a year and a half.⁴⁸ As the hacks disappeared the professionals took over, and they and the army matured with the war.

As the war progressed, the Iraqis demonstrated one Soviet characteristic that suited them very well. Once a commander was successful, he was promoted and given more opportunities to show what he could do.⁴⁹ Toward the end of the war, two Corps commanders—Rashid and Fakhri—emerged as the trouble shooters of choice. They even

achieved public stature through frequent media exposure, highly unusual in a society like Iraq's with the well-developed personality cult of the ruler. Rashid was something of a braggart, but was sufficiently successful that he was tolerated. Fakhri tended to be more taciturn and even morose. However, he is also a leading Ba'thist; hence that unusual combination, a political as well as military figure.

When the war began, the army was a relatively small force and command and control should have been relatively simple and straightforward. The initial operations were conducted on a very broad front, but against practically no enemy forces. The general outline of the tactics, as best we can determine, seemed to accord with standard military practice.⁵⁰ Still the performance of the Iraqi Army was remarkable for its stiffness. As noted, some of this could be explained by the stricture not to take too many casualties, but frequently the units would cease forward movement for days on end, without any discernable reason.

In the south, the Karun River line, at which the Iraqi advance halted, appeared to be a normal phase line, clearly identifiable and defensible. But other halt lines had none of the usual phase line characteristics. It seemed as if the units were stopping in response to an arbitrary line on a map—drawn by someone who had little or no military training. It is fairly well established that the Iraqi General Staff was capable of executing proper military operations; therefore, our opinion is that complaints about ineptitude and overly centralized control should be directed toward the Palace.

A further puzzling factor is the prolonged use in combat of the Ba'thist militia, the so-called Popular Army. Due to the militia's abysmal performance, the regular army experienced several defeats early in the fighting. Yet, it was still being used as late as 1986, when it virtually lost Al Faw for the Iraqis. This is surprising for a force that had demonstrated its ineptitude so early on.⁵¹

One of the worst debacles of the war occurred during the 1982 counteroffensive in Khuzestan. There is some explanation for the initial reverses in this battle—the Iraqis were overextended and short, proportionately, of infantry and, further, they did not expect the violence or scale of the Iranian reaction. But at a point the Iraqi command structure seems to have become paralyzed, and this undermined the soldiers' confidence in their leaders. When the order came to withdraw, it was apparent to the men that it was too late and that certainly contributed to the rout. In general this looks like a debacle, but when we evaluate the actions of armies, we must be careful not to use the yardstick of experienced Western armies.⁵² We need to look carefully at the total context and appreciate that we are looking into someone else's private world, as it were.

The Iraqi commanders were up against what to them must have been a strange and terrifying phenomenon: the human-wave attack. Going into Iran, they never anticipated facing waves of martyrdom-seeking Iranians. As one Iraqi commander put it, "It's horrifying; they swarm at you like roaches." As with our own initial experiences with the Chinese in the Korean War, much of the Iraqis' collapse in battle must be attributed to the unexpected nature and violence of this new tactic.⁵³

One last point, relating to the final battles—some observers have denigrated these, claiming that the Iraqis were opposing a "hollow army." If one is willing to accept the proposition that Karbala V was the decisive battle of the war—as we contend—this criticism is not tenable. At Karbala V both sides were evenly matched in terms of manpower.⁵⁴ Iran had raised the largest army ever. Its troops were prepared for a victory, and went into battle armed with newly acquired supplies of TOWs.⁵⁵ Iraq won this crucial battle by exemplary command and control, excellent combined arms tactics and the remarkable bravery of its troops.

Fire Support. There were reports during the war that the Iraqis were unable to properly employ their artillery. There may be some validity to this although the structure was in place to

accomplish Soviet-style fire support. In its crudest form, Soviet fire support is based on blasting a hole in the enemy defenses with overwhelming masses of fire. For years this style has been portrayed as a crude bludgeon. In fact, a fair-minded reading of German accounts makes clear that even in the early days of WWII the Soviets were relatively sophisticated in their use of fire support. They became significantly better as the war wore on and so, too, did the Iraqis.⁵⁶

One observer commented that in 1985 he went to the Iraqi front and visited a regimental command bunker. Greeted by a forward observer (FO), he asked if there was a fire plan available and was shown a Vietnam style map and "measle sheet." Pointing to one of the many dots (targets), the observer asked to have fire brought on that point. The FO picked up the phone, uttered a phrase and the visitor observed the impact of rounds on target in less than a minute. That demonstration and most other available evidence indicates that the Iraqis prefer fixed fire plans. The evidence also suggests that because of their exceptional planning ability, fire plans and programs of fires are perfectly adequate for most of their needs. Seasoned artillerymen, however, will suspect unit commanders who always seem to work from an overly detailed plan. In defense of the Iraqis, they appear to be able to cast aside the plan when necessary. We must not forget that Operation "Blessed Ramadan"—the retaking of Al Faw in 1988—was supposed to take about 5 days. That it was successfully executed in 36 hours indicates a considerable degree of flexibility. How much of this flexibility was evident in the alteration of the schedule of fires we do not know, but it must have been considerable.

What was most impressive in the realm of fire support was the gradual integration of chemical fires. However much we may decry the use of chemicals, we know from our WWI experience that their integration is not a simple operation. As best we can tell at this time, chemical fires became a normal part of all defensive fire plans and probably of offensive ones as well. Given that the Iranian Basij were seldom properly armed and less often protected against chemicals, it was

effective practice to attack assembly areas with chemicals as soon as they were detected.

The Iraqis developed the tactic of gassing Iranian artillery positions.⁵⁷ We do not know exactly how the Iraqis deduced the effectiveness of this tactic, but we are certain that it became a standard part of their fire plans. We know from our own experiences that it is hard to work guns in full chemical protective gear. Less well known, but true nevertheless, is that the greater the amount of motion in a chemical environment, the greater the contamination as the chemical has time to seek out flaws in the protective garment at the seams and points of greatest motion.

Artillery support is best given from fixed positions where the ammunition can be handled once only. If the position is struck with a persistent chemical agent, it will only be a matter of time before the efficiency of the crews is degraded. If the option to displace to a new position is taken, there is the attendant loss of availability while changing positions. In either event, the quality of fire support is diminished. The Iraqis were regularly successful at this.

Another of their chosen targets was the command and control system. Whenever they could force the Iranian command elements to mask, they disrupted command and control functions and on some occasions may even have decapitated the command structure. It is possible that this happened at Al Faw in 1988, but the evidence is ambiguous. Stronger evidence for this view exists from the 1988 Fish Lake and Majnoon operations.⁵⁸

Target Acquisition. We know little about target acquisition except that the Iraqis sought to buy as many target acquisition radars as they could properly employ. Target acquisition was a particular problem in the flat lands of Khuzistan and in the marshes of the border area, so the Iraqis appear to have used the massive berms for observation posts from which they could control indirect fires and possibly helicopter gunship strikes.⁵⁹ It was primitive but apparently functional.

Position Defense. The evolution of the Iraqi defensive system is significant both for its thoroughness and for what it tells us about the Iraqi approach to problem solving. When driven back across their own borders in 1982, the Iraqis assumed the strategic defense and, operationally, the position defense. There is little doubt that they had been surprised by the violence of the fanatical Iranian reaction. Once the Iranian population mobilized against them, the Iraqi dispositions proved inadequate—they were spread too thinly along the border. As the existing forces struggled to hold the border, new brigades were formed and desperate attempts were made to put together a defensive network. What evolved would warm the hearts of Vauban, the 18th century French father of fortification, and Andre Maginot, France's 20th century Vauban. Vauban was an engineer whose defensive systems were based upon mathematical relationships among firepower, topography and earthworks. Theoretically, certain physical arrangements of fortifications and weapons could be created which would effectively preclude penetration of the defensive networks. Maginot carried the same theories forward into the 20th century and designed a national defensive system for France between the two world wars. Vauban's system worked, but Maginot's did not. The difference was that the Maginot Line failed to take into account the significant increase in mobility of military forces and their vastly increased striking power. This is not to blame Maginot, who had originally structured his system to handle changed conditions. He called for a large, mobile striking force behind the system which would deal with attempted penetrations. Unfortunately for France, the cost of Maginot's defensive works precluded the creation of that mobile reserve. Such poverty did not constrain the Iraqis.⁶⁰

From the beginning, the Iraqis maintained a substantial striking force in their mechanized and armored divisions. These became the fire brigades which moved from point to point along the line to deal with threats to the system. In time, the Republican Guard evolved into the principal strike force as it grew progressively larger and took on an increasingly elite character.

But the Iraqis did not simply build up strike forces, they complemented and supported this force through the construction of an extremely efficient system of roads behind the front. In effect, they constructed a system which gave them interior lines. This system was further augmented by a superb traffic control system and the purchase of over 2,000 heavy equipment transporters. Using this network, the Iraqi high command could order division-sized units to move the length of the country and reasonably expect them to be in place within 24 hours.

The Iraqis are apparently capable of moving an entire corps this rapidly. Even though they were never opposed by a force of equivalent mobility, their ability to move as they did is no mean feat. The Iranians were aware of this capability and, in Operation Badr in 1985, attempted to disrupt the network by cutting through it. They failed at terrible cost.

Logistics. Logistics lessons must be addressed as an extension of the defensive system. Integrated within Iraq's system as it exists today are all the logistic establishments required for long-term operations.

The system is based on a road network. Located at intervals along it are medical, maintenance, and supply facilities. These are set up to support a specific area irrespective of the particular units stationed there. In this way, the facilities can be expanded to deal with a large influx of units, but they are most often augmented by rolling resupply.

With the wealth that oil provided them, the Iraqis have been able to put major portions of their supplies on trucks and shift them about as needed. When a unit moves from one sector to another, it connects into this system via its organic supply, maintenance and medical companies. To facilitate this operation the brigade has been made the basic functioning unit of the Iraqi Army. These brigades are designed to be transferable among division headquarters.

This system also controls the flow of personnel. Throughout the war the Iraqis faced a problem of keeping up morale, which was aggravated by the extraordinarily long tours of duty. Remember, Iraq was outnumbered three-to-one. As a consequence, it was not unusual for Iraqi troops to serve up to 8 years on the front.

To alleviate this hardship, as soon as it became possible, the Iraqis instituted a very liberal leave policy. During predictably quiet periods, soldiers were allowed a week's leave a month. The soldiers could be trucked back to the main traffic arteries, pick up transportation there and move to one of the many privately-owned-vehicle parking lots, show the sentry their pass, identify their vehicle, and drive home. When they returned from leave, they were required to check in with one of the military police regulation points to verify the current location of their unit, since some units—especially the armored and mechanized—had a tendency to move rather frequently. There they would receive information as to the new location and directions to the closest parking/storage facility to which they would proceed. This sort of activity reflects not only innovative personnel policies but interesting traffic management as well.

What remains to be answered is the ability of the ground forces to project their logistic support structure beyond their borders. In the closing days of the war, the army drove deep into Iran and maintained itself with apparent ease; that it did not drive deeper appears to have been based on political considerations. Apparently, therefore, the Iraqis can project their military power professionally. (The invasion of Kuwait is also a conclusive demonstration of Iraqi ability to project and sustain a large force.)

A caveat, however, is that they were facing an opponent who was in ruins. The Iranian ground forces were little more than a shell at the time of the last offensives, and the Air Force was little better, although it could have retaliated to some limited degree. While it would certainly be disrupted by air attacks, that so much of Iraq's logistical support system is truck

mounted, and on a seemingly unlimited number of trucks, could compensate to a large degree for heavy losses.

Air Defense. This issue relates directly to the last. We do not know how good the Iraqi Air Defense system is. We can say, however, that it has improved significantly since the war with Iran began. In the early days of the war the air defense network was just being built.

Since the Iranian air threat never grew much beyond nuisance value, the air defenses were only slightly tested. Some obvious command and control problems remained late in the war, which were revealed by the shooting down of an Egyptian Alpha Jet over Baghdad while enroute to the International Arms Exhibition. That was unfortunate, but at least it shows Iraqi gunners know how to use the shoulder fired STRELA 5A-7 weapon that shot down the jet.

It is generally believed that the radar warning system is improving. Some radars are of French design, most are probably Soviet. Western analysts generally agree that air defense missile systems are few, and of older design which could easily be eliminated.

Gun systems—not as susceptible to ECM attack—are plentiful; however the Iraqis could use even more of them in a region where air power is frequently decisive. These are subject to attack with stand-off or area weapons systems.

If the Iraqis are going to protect themselves against air attack, they will need to purchase many more modern missile systems, tie them together in an integrated command and control system and augment them in greater depth to protect against stand-off attack. The Iraqi AWACS is now functioning and will give them some depth, but they will need redundancy in coverage with multiple AWACS and, more importantly, training against highly sophisticated threats, before they will be able to maximize that asset.

Professionalism in the Officer Corps. As noted in the Command and Control section, the picture varied over time and with officer rank. When the war began, the Iraqi senior officers comprised a mixed lot of politically reliable hacks, some politically reliable professionals and some apolitical professionals. The political hacks were purged.

The purge was condemned in the West, but the purging of incompetent officers is not unusual. If we recall the French experience of WWI, 75 percent of the division commanders were relieved within the first few months of the war. Further, as General Pershing was building the AEF in 1917, he simultaneously screened prospective division commanders and prohibited some from command in the theater, thus culling before the test came.⁶¹

Most of Iraq's higher level commanders appear to have been politically reliable professionals after 1982. Indeed, from 1984 on, the issue of competence seems to have been the principal deciding factor for advancement. (It is hard to explain the retention of the loud-mouthed General Rashid, Commander of the VII Army Corps, on any other grounds.)

Light Infantry. The most prominent lesson about light infantry was that, in the proper geographical/topographical situations, it can deal handily with armored forces unsupported by covering/accompanying infantry. Many of the Iraqi Army's most embarrassing moments resulted from attempts to crush Iranian infantry with pure tank attacks.

In the dry, open areas, tanks and a few accompanying APCs did an admirable job of slaughtering Iranian light infantry, but in the marshes, along the causeways, and in the cities, Iranian infantry, armed principally with RPGs, inflicted terrible losses upon Iraqi armor and several times stopped it cold.

As the Iraqis acquired more infantry, and as the lower level tactical handling of the troops improved, the slaughter of tank forces declined. There were still occasions when the terrain dictated a narrow frontal assault, as during the initial

counterattacks to retake Al Faw in 1986, where but two avenues of attack were available for armored forces. These were along roads that stood above the water-logged swamps and the Shatt-al-Arab. Channelled along these avenues and ever mindful of the need to keep infantry losses to a minimum, these attacks took on the nature of tank rushes against dispersed light infantry.

Although the Iranians were able to inflict heavy casualties on the Iraqis with artillery fires from across the Shatt, evidence strongly suggests that the RPG armed infantry did the most damage. The Iraqis were unable to oppose Iran's infantry with their artillery because they either did not have or could not use time fuzes to make their rounds burst above ground. Where the rounds impacted in the marshes, they only burrowed into the mud. In this situation the efficacy of the light infantry could have been easily overcome, but was not for simple technical reasons.

It is growing increasingly clear that there is another solution: the application of fuel air explosives to infantry positions can have a devastating effect.⁶² The Iraqis may already be aware of this. Some evidence suggests that this is the weapon—not gas—that the Iraqis used with devastating effectiveness against the Kurds (the oft-commented upon slaughter of the "5,000") late in the war. In any event, when the situation was right, light infantry showed itself able to deal with armor, but the ability to frustrate the infantry was easily available, and one is driven to conclude that light infantry forces are of very limited utility against a well-trained combined arms team. This is a very old lesson, but one we are reluctant to learn.

Another aspect of light infantry, for which little information is available, bears deeper examination. The Iraqi Army made widespread use of "commando" and "special forces." Exactly what their function was is unclear. At the higher headquarters, the function of the commando units seems to have been raiding and deep penetration patrols. At these upper echelons, the special forces may have overlapped in function with the commandos.

Late in the war, large numbers of additional special forces units were formed, which may have reflected a number of demands. First, they may have represented a need for specially motivated infantry forces with which to carry out the final operations. Second, they may have been ordinary infantry units composed of college student volunteers who were inveigled into these units by virtue of the "romance" of being in special forces, and many, in fact, may have received special training. It has been reported that the Iraqis were very good at executing deep penetration reconnaissance and strike missions, which they performed with a high level of professionalism.

Whatever the reasons for the appearance of these troops, one thing is certain—they represent the democratization of Iraq's military. Throughout its long history the ranks of Iraq's army were filled with peasants who were treated like cattle. The Republican Army troops are treated with respect—they are Iraq's equivalent of citizen soldiers.

Summary. We have derived the following lessons from the war:

Operational.

- The Iraqis are formidable in the defense. They are trained and experienced in the conduct of both positional and mobile defense.
- The Iraqi defensive modus operandi is to establish a deep, integrated fortified zone augmented by large quantities of artillery. These positions are secured by highly mobile, armor heavy reserves which move rapidly along specially constructed road networks. Command and control is flexible enough to accommodate infusion of large numbers of combat brigades within a small sector.
- The Iraqis have limited experience in projecting forces. For most of the war, Saddam Husayn held his army in

check, restricting it to the defense. The President loosened the reins and surrendered greater control to the field commanders only after 1986. As a consequence, the generals were more experienced at reacting to enemy moves than to initiating their own operations. The final campaign of the war demonstrated, however, that they were able to project their forces deeply and sustain them for about a week.

- The Iraqis have demonstrated the ability to execute combined arms operations. Their successes, however, have been largely against light infantry forces.
- On the offensive, they prefer high force ratios, very heavy fire support, and the use of pre-attack rehearsals on mock-ups if possible. They are detailed planners, but are not inflexible. They are excellent problem solvers and will work diligently at solutions even making strategic adaptations if required.
- They have demonstrated the capability to integrate chemical weapons in both defensive and offensive operations with good effect; they do not use chemical weapons as weapons of mass destruction. Preferred chemical targets are artillery, logistics, and command elements.
- The brigade is the basic combat formation. Divisions have been seen controlling many more than the traditional three brigades.

Tactical.

- Combined arms are now the norm.
- Deception operations are normal.
- Attempts will be made to isolate the battle area, with BAI and possibly chemical fires.
- Fire support will be heavy and may include chemical and/or fuel-air explosive attacks.
- The Iraqis prefer long-range artillery and multiple launch rocket weapons which outrange most U.S. weapons systems.
- CAS will be provided primarily by helicopters but they will seldom venture beyond the FLOT. Air CAS may support on call.
- The Iraqis will attempt to gain very high force ratios prior to attack.
- A mobile defense can be expected unless time permits development of a deep fortified zone.
- Conduct of the defense will involve attempts to lure attackers into fire traps and killing zones. The defense will be formidable.
- Level of infantry aggressiveness is uncertain.