

IV. PHASE ONE: IRAQ'S INVASION OF IRAN

The history of the Iran-Iraq War had many dimensions, although the key dimension throughout the war was the land conflict. Both Iran and Iraq were locked into a relatively static land battle along their border area during most of the war, although this land battle was punctuated by periods of intense offensive combat. These battles were largely battle of attrition. Both sides occasionally attempted maneuver warfare, but usually with limited success. It was only in the Spring of 1988, that Iraq showed the ability conduct effective combined arms and maneuver warfare. The Iran-Iraq War is a classic case study in the problems of technology transfer to Third World armies, and in the difficulty of converting from relatively static and attrition-oriented land forces to forces which are capable of fully utilizing modern weapons to carry out every aspect of combined arms warfare.

The war did, however, provide important insights into other aspects of war. Iraq gradually developed a relatively effective mix of air and missile power, while Iran saw much of its air power decline into virtual impotence. Iran supported terrorism, coup attempts, and uprisings in Bahrain, Kuwait, and Saudi Arabia.¹ Both Iraq and Iran conducted a "tanker war" against shipping, and significant engagements occurred between Iran and U.S. naval forces. A major "war of the cities" helped shape the outcome of the conflict, as did the use of chemical weapons.

The complex interactions between all of these types of warfare do, however, make the lessons of the Iran-Iraq War exceptionally difficult to summarize. There were significant shifts in the nature of fighting, in the nature of the forces engaged, and in the number of nations engaged. Many of the key lessons of the war relating to strategy, tactics, conflict management, and escalation management changed with time. As a result, many of the key lessons of the Iran-Iraq War can only be understood in historical terms.

4.1 The Major Phases of the Conflict

The Iran-Iraq War had several major phases, including Iraq's invasion of Iran, Iran's attempt to conquer Iraq, and foreign intervention in the conflict. There is no way to divide the main phase of war into precise periods, but the key shifts in the fighting may be summarized as follows:

- Iraq's invasion of Iran, and attempt to become the dominant power in the Gulf (1980);

¹ The bulk of the "volunteers" were Egyptian and Sudanese workers recruited to Iraq for other purposes. Jordan did send a volunteer Yarmak Brigade to Iraq with a claimed strength of 2,000 men, but this force never seems to have engaged in combat.

- Iran's liberation of its territory (1981-1982)
- Iran's initial attempt to conquer Iraq (1982-1984);
- A stalemate and bitter war of attrition in which Iran sought to overthrow the regime of Saddam Hussein and Iraq tried to force Iran to make peace (1984-1985);
- Renewed Iranian "Final Offensives" Against Southern Iraq (1986-1987); and
- Expansion of the tanker war in the Gulf to include Western navies, while the land and air war of attrition continues (1987-1988).
- Major Iraqi victories on the land, the collapse of Iran's military forces, Iranian agreement to a cease-fire, and uncertain peace negotiations. (1988-1989).

4.2. Phase One: The Iraqi Invasion

The first phase of the war includes the period that began when Iraq shifted from limited military action to outright invasion, and attempted to consolidate control over part of Iran and/or reach a cease-fire on favorable terms while it still occupied Iranian soil. This period ended when Iraq was forced onto the defensive and Iran began to successfully counterattack. More than anything else, this initial period of the war is a case study in the cost of treating military forces primarily as political symbols and tools for internal security purposes and then attempting to use them as real world military forces. At the same time, it is a lesson in how seriously leadership elites can miscalculate in initiating a conflict, and in the factors that can drive Third World states into patterns of conflict they rapidly find they have little ability to control.

4.2.1 Iraq's Invasion Plan

Even in retrospect, it is difficult to understand many of the motives behind the way in which Iraq planned and executed its invasion of Iran. Even if one ignores all of the political and strategic factors discussed in the previous chapter, the Iraqi attack provides an important lesson in just how unrealistic and incompetent a Third World state can be in launching a major war. Both the initial air attack and land invasion were so badly planned and executed that they cost Iraq virtually all of the initial advantages it obtained from surprise, superior forces, and the disorganization of Iran's military forces.²

Part of the problem was unquestionably the lack of an effective Iraqi planning staff and high command, and the overall lack of Iraqi military professionalism discussed in the previous chapter. One authority has indicated that Iraq was actually forced to draw heavily on an exercise organized by British instructors at the Baghdad War College in 1941, and which tested Iraq's ability to seize Abadan, Dezful, and Khorramshar within a week to ten days.³

Yet, Iraq made many other mistakes which went far beyond problems in strategy and in the initial planning of its attack. These tactical mistakes may be summarized as follows:

- Iraq does not seem to have ever really analyzed the impact of launching an attack on a state in mid-revolution. It seems to have simply assumed that its attack would divide Iran, rather than unite it, on the basis of the power of the elites and ethnic leaders that existed before the revolution. Even some of the most senior Iraqi leaders admitted during interviews later in the war that they had never considered that the net effect of their attack would be to create a massive uprising of support for Khomeini.⁴
- In broader terms, Iraq lacked an effective intelligence system. This failure is symptomatic of problems which provide important lessons for all nations. Some intelligence failures are inevitable. No reliable methodology exists for estimating the combat effectiveness, adaptability, or will of enemy forces

² The analysis of Phase One is based heavily on the author's trips to the region and interviews of Iraqi and Iranian officers and officials, plus his prior writing for the Armed Forces Journal International (Especially "The Lessons of the Iran-Iraq War", Parts I and II, April and June, 1982) and in the Gulf and the Search for Strategic Stability, Boulder, Westview, 1984. It also draws heavily upon the work of Colonel W.O. Staudenmaier, U.S. Army Strategic Studies Institute; Edgar O'Ballance, The Gulf War, London, Brassey's, 1988; Nikola B. Schahgaldian, The Iranian Military Under The Islamic Republic, Santa Monica, Rand R-3473-USDP, 1987; Sepher Zabhi, The Iranian Military in Revolution and War, London, Routledge, 1988; Keith McLauchlan and George Joffe, The Gulf War, Special Report 176, London, Economist Press, 1984, Keith McLauchlan and George Joffe, Iran and Iraq: The Next Five Years, Special Report 1083, London, Economist Press, 1987 and various working papers for the International Institute of Strategic Studies, Royal United Services Institute.

³ Edgar O'Ballance, The Gulf War, London, Brassey's, 1988, p. 48

⁴ Based on the author's interviews in Baghdad, London, and Washington.

which have never been tried in combat. It is easy to make estimates of such capabilities, but it is virtually impossible to back them up with meaningful intelligence indicators and methods of analysis. These problems are particularly severe when estimates must be made about the forces of developing nations, forces in political transition, and forces acquiring new tactics and technologies.

- The problems in intelligence also increase in cases like the assessment of Iran, when reliable human intelligence (HUMINT) is not available in great detail, and when there is little recent training, exercise, or combat performance data to draw on. Order of battle intelligence, technical intelligence, and data on manning and stock levels are important, but only in the context of adequate HUMINT and readiness intelligence. Finally, no intelligence estimate can be adequate which lacks a reliable basis for understanding how enemy and allied forces will be commanded in war and the probable political and military behavior of both their ordinary troops and high command.
- Iraq planned for a short war, and Iran captured documents from Iraqi prisoners of war that called for Iraq to take Khorramshahr, Abadan, Ahwaz, Dezful, Masjed Soleyman, and some of the key oil centers in Khuzistan in 10 to 14 days.⁵ Yet, the Iraqis never seem to have understood the importance of speed and maneuver in achieving these objectives. The Iraqi high command seems to have grossly underestimated the speed with which Iran could organized effective resistance, and failed to understand the urgency of acting on surprise and on maneuver around the early resistance it encountered.
- Iraq's land and air operations were planned in virtual isolation from each other. Once Iraq's initial air operation failed, the air force retreated out of the conflict for several months, often leaving the ground forces to fight on their own.
- Iraq either did not analyze its own vulnerabilities or it assumed Iran was incapable of taking advantage of them. Although Iraq planned massive artillery fire across the Shatt at Iran's cities and oil facilities, it does not seem to have considered the risk that Iran would fire at equally vulnerable Iraqi facilities. In particular, it ignored the vulnerability of its ports and oil facilities at Basra and Faw, and of its own oil loading platforms in the Gulf at Khor al Amaya and Mina Al Bakr.
- Iraq sought to minimize day-to-day casualties without ever understanding that delays designed to reduce casualties on any given day could sharply raise

⁵ Sepher Zabih, The Iranian Military in Revolution and War, London, Routledge, 1988, pp. 169-170.

casualties in the future. Iraq failed to be properly aggressive when time was critical, and committed too few forces early in a battle or conflict. Until the last year of the war, it failed to achieve concentration of force and far too often, it sent too few forces and sent them too late.

- Iraq did not have an effective concept of operations for land warfare. It did not have a realistic concept of maneuver based on the actual capabilities of its forces. It began the war with only a mechanistic concept of combined operations, and began the war without any capability for warfare in urban and built up areas and with limited ability to combine armor, infantry, and artillery. It lacked both a concept of defense in depth and an understanding of the need for aggressive area defense, as distinguished from defending a single line or a few key points and lines of communication.
- Iraq had no real concept of air power. Its planning and operations had no real cohesion or effectiveness above the individual unit level. It at best went by the book, and someone else's book at that. It did not understand the need for large scale exercises and to test its plans in practice. It was equally unprepared for both air offense and air defense.
- Iraq did not provide effective leadership at any level. Although Iraq's top leadership deliberately created many of Iraq's military problems through systematic politisation of the armed forces, that same leadership seems to have totally ignored the military cost of its own actions. Every level of command tended to refer all decisions upwards. The entire burden of command eventually rested on Saddam Hussein and his immediate staff in Baghdad -- a burden of command they lacked both the communications and the expertise to bear effectively. There was no momentum of command. Operations tended to halt while awaiting orders, rather than go on and wait for any adjustment or change.
- The command and control system was incapable of transmitting the true tactical situation. Senior Iraqi officers later noted that they often got more timely information from the media than they did from their own commanders at the front.
- Iraq relied on slow moving, mass artillery fire when armor could easily have seized a given objective. Iraq also often failed to support its armor with infantry when this was necessary. Iraq was unprepared for urban and popular warfare.
- Iraq allowed its forces to be channeled into roads and other fixed lines of communication. Iraq also never seems to have understood the need to fully secure its flanks and the rear areas in the territory it captured.

- Iraq did not conduct aggressive land or air reconnaissance. It allowed Iran to deploy and achieve tactical surprise under conditions where it should easily have been able to acquire adequate intelligence.
- Iraq did not properly secure its sources of resupply. It did not inform Moscow of its actions and the USSR promptly cut off most supply. This forced Iraq to turn to other Arab states, the PRC, and North Korea under crisis conditions.
- Iraq had no real contingency plans for a long war, and was forced to improvise mobilization plan once the war began. At least for the first few years, it never seems to have considered the risk of a truly prolonged conflict.
- Many key weapons and munitions had never been realistically tested before the war. For example, much of Iraq's artillery failed to be effective because of simple fuzing errors. Most of Iraq's surface-to-air missile units failed to operate effectively except at medium to high altitudes.

4.2.2 Iraq's Air Attack on Iran

The Iraqi air force began its attack war by attempting to copy Israel's successes against Egypt, Jordan, and Syria of 1967. Iraq seems to have acted on the fact that only about 18% to 50% of Iran's combat aircraft were operational in any form, and its command structure was in a state of chaos. Iraq ignored the fact that the Arab-Israeli war of 1973 had shown in great detail that even the best air force could not destroy an air force on its bases if the target was a well sheltered and dispersed force.

Iraq also ignored the practical limits of its attack aircraft. While Iran had a modern attack force of 188 F-4D/Es and 166 F-5E/Fs when the Shah fell, Iraq had a far inferior attack force when it struck at Iran. It had 12 TU-22s optimized as nuclear strike bombers, 10 obsolete IL-28 bombers, 80 export versions of the MiG-23, 40 short-range SU-7Bs, 60 export versions of the SU-20, and 15 obsolete Hunters. This gave Iraq an effective modern attack force for long range tactical missions of about 120 MiG-23s and SU-20(22)s.

Iraq started the war with the pilot and support capability to generate a maximum of 80-90 sorties from such aircraft a day for a period of no more than three days. It would have taken hundreds of sorties more per day for Iraq to have achieved its initial objectives with the aircraft then in its forces, and then it would still only have been able to crater Iranian runways and hit vulnerable facilities, not destroy sheltered aircraft.

Iraq proved this on the first day of the war. It did commit virtually all of its combat ready fighters and bombers to its surprise air attack on September 22. Iraqi aircraft struck six Iranian air bases and four Iranian army bases. Iraq claimed to have caused heavy damage to the air bases and airports at

Mehrabad, Kermanshah, Sanandaj, and Al-Ahwaz, and the Army bases at Hamadan, Tehran, Isfahan, Dezful, Shiraz, and Tabriz. In fact, however, Iraq's first major attack on Iran was its first major failure of the war.

Iraq's attack against Mehrabad exemplified Iraq's problems. Iraq's bombing runs scattered ordnance over so wide an area that the Iranians on the ground later found it difficult to determine the original targets. Efforts to close the base by cratering the runways were a dismal failure. The bombs designed to crater the runways had little effect, even in the few cases where they hit the runway. They skipped over the hardened surface, causing only small, easily repairable craters. Many of the bombs failed to explode, possibly because of fuzing and arming problems. Long rows of transport aircraft, which could not be sheltered like Iran's fighters, were left untouched. Only one B-707 and an F-4 undergoing repairs suffered any damage.

Iraqi commanders committed less than 20% of the sorties necessary to achieve the effects they sought, and did not provide for meaningful reconnaissance and follow-up attacks. While Iraq launched follow-up air raids against four Iranian airfields on the 23rd and six on the 24th -- hitting Tabriz and Dezful twice, and Shahroki, Kermanshah, Ahwaz, and Sanandaj-- the raids only damaged Dezful to the point where they had more than a minimal effect in halting Iranian air operations, and Dezful was repaired relatively rapidly.

Admittedly, the Iraqi Raids attacked an extremely difficult set of targets. Iran's air bases were well designed. Shelters and command facilities were well dispersed. While runways could be hit, they were very well built and a limited number of shallow runway craters were easy to repair.

In spite of more than a year of revolutionary turmoil, Iran's air force had a very different force posture from the posture of Arab air forces in 1967. Most of the aircraft on the Iranian air bases were sheltered or dispersed. While Iraq did hit some exposed transport aircraft and a few combat aircraft, it did not do any serious damage to the Iranian air force.

The Iraqi air attacks on Iran's army bases were equally ineffective. The army bases were large dispersed targets with well bunkered munitions. There were no high value targets where a limited number of hits would have had a devastating effect and the location of the Iraqi air strikes indicated that the pilots had never been assigned specific areas of the base to attack. It would have taken wave after wave of attack sorties to kill or disable a significant amount of armor and heavy weapons, or even to produce high casualties. Iraq flew less than a tenth of the sorties needed against any major Iranian army target. It confused smoke and damaging buildings -- many of which had few occupants -- with producing massive damage.

The problems inevitable in attacking with insufficient force to achieve the objective were compounded by the fact that Iraqi pilots and aircraft generally lacked the attack training and experience to achieve anything like the lethality of Western or Israeli forces, even in those cases where Iranian aircraft were openly exposed to attack. Pilots lacked the training to accurately hit small tactical targets in high speed passes, and had to attack with little mission prebriefing and reconnaissance data. They also had to fly Soviet fighters whose avionics did little to assist the pilot in making his attack, and using conventional ordnance which often lacked the special fuzing needed to attack the hard targets involved.

Later discussions with senior officers of the Iraqi Air Force confirm this explanation of why Iraq was unsuccessful in its air attacks on September 22, and why it was unsuccessful in so many other attacks during the course of the war. Several senior Iraqi officers stated separately that the Iraqi pilots flying the attack missions had little practical training, aside from limited range training with dummy munitions, and the bombing of Kurdish villages. The avionics on their aircraft were relatively primitive export versions of Soviet technology, and had CEPs which often exceed 200-500 meters. There were no technical personnel experienced with the details of weapons effects. There were no operations research facilities. There were no technical crews with experience in arming or fuzing air munitions for demanding missions, there were no photo interpreters and commanders experienced in damage assessment, and the USSR failed to provide more than minimal technical support and aid in any of these areas.⁶

Iraq also entered the war with a highly politicized Air Force Command structure that had little real operational experience in attacking anything other than undefended targets like Kurdish villages. This may explain why the high command of the Iraqi Air Force lacked any realistic concept of the amount of air power needed to achieve a given objective, or "mass". The Iraqi high command simply did not, or could not, do its homework. It failed to work out a realistic picture of the number of attacks necessary to destroy a given objective or of the forces it would have to commit over time. Iraq flew few low level reconnaissance missions before its initial air attacks on Iran, and failed to conduct detailed mission planning or provide detailed mission briefings to its squadron commanders. At the unit level, it failed provide detailed photos of the target area. or properly identify high priority targets when it did brief. using maps or photos. It did not realistically allocate the proper number of sorties to a given target even at the unit level, and often failed to select munitions which could do suitable damage.

Iraq had no real experience with armed reconnaissance. After the initial attacks, most sorties had to be approved at relatively high echelons of command,

⁶ Based on conversations with Iraqi air force officers in Iraq, the U.S., Britain, and France in 1982 and 1984.

and took hours or even days to schedule. Mission pre-briefs were poor to non-existent. There were few trained forward air controllers (FACs), and most units lacked any at all. Many of the individual pilots sent out on attack missions had little experience in delivering munitions, and the majority had only flown a handful of sorties -- if any -- using the attack payloads they were being asked to use in combat.

Further, once it executed its attack missions, the Iraqi command systematically lied to itself about the results. It failed to fly enough damage assessment or reconnaissance missions to get a realistic picture of what it had accomplished. It accepted wildly exaggerated pilot damage claims, and often added to these claims at higher echelons of command. These claims reinforced the Air Force's initial tendency to underestimate the number of sorties required to achieve a given objective, and false claims of success were so heavily institutionalized at every level of operations and command that the Air Force could do little to learn from experience.

As for the Iranian Air Force, it not only emerged from Iraq's attacks virtually intact, it rapidly went on the counteroffensive. While it had suffered badly from various purges during the course of the revolution, it was able to mobilize enough pilots to take advantage of the fact it had acquired much better aircraft, munitions, and training from the U.S. than Iraq had from the USSR. As a result, Iran was able to fly some 100 sorties against Iraq on September 23, 1980.

While these Iranian sorties were not particularly effective, and Iran's sortie generation capability rapidly dropped to less than 50 per day, the attacks still came as a considerable shock to Iraq. The Iranians were also able to win most air-to-air duels during the early period of the war, and while they could only fly limited numbers, they occasionally proved highly successful in delivering low altitude air attacks against Iraqi targets. Similarly, Iran was initially able to make good use of the helicopters purchased by the Shah to fly transport and attack missions.

The Iraqi air force then virtually abandoned the skies. Iraqi sortie rates dropped to a minimum except when Saddam Hussein sought to achieve some major strategic effect or reprisal against Iran. Some Iraqi aircraft were dispersed to countries in the Southern Gulf, and others were flown to bases in Western Iraq. While Iraqi aircraft and pilots were inferior to those of Iran, it is important to note that they conduct this retreat from the skies in spite of the fact they had a 3:1 to 4:1 superiority in operational strength over Iran.

4.2.3 Iraq's Land Invasion of Iran

The initial performance of Iraq's army was somewhat better than that of its air force, but Iraq still only scored limited strategic successes when it should have been able to achieve far more. When the war began, Iraq had five full

divisions in the north, two more guarding the central front opposite Baghdad, and five more in the south. The five divisions in the south included three armored and two mechanized divisions. These Iraqi forces underwent substantial redeployment before the war began. Iran, in contrast, had only four of its nine understrength divisions along the 1,300 kilometer border.

Iraqi land forces attacked at four points along a 700 kilometer front the same day that Iraq launched its air strikes against Iran. The Iraqi Army sent about half of its combat ready manpower, and most of its 12 fully manned divisions, across the Iranian border. By the first day of the war, Iraqi ground troops had penetrated about 15 kilometers into Iran, captured Qasr e-Shirin, and reached the outskirts of Sumar, Zahab, and Charmel. Other Iraqi troops and artillery were approaching Abadan and Khorramshahr.

In the north, one Iraqi mechanized or armored division, one mountain division, and supporting elements advanced from positions in the Kurdish part of Iraq, just west of the Iranian border town of Qasr e-Shirin, towards Gilan Garb and Kermanshah.⁷ The Iraqi forces attacking through Qasr-e-Shirin rapidly took the small border city, pushed Iran's forces back, and advanced as deep as 45 kilometers into Iran. Iraq's forces then spent six days reaching the villages along the main route to Tehran at the edge of the mountains about 10 miles northeast of Qasr e-Shirin. They spent seven days taking Gilan Gharb, and eleven days taking Sumar.

The advancing Iraqi forces made heavy use of artillery, and used anti-tank guided missiles to attack hard points and road blocks. They conquered roughly 120 square kilometers of Iranian territory, and met with little more than minor resistance from a mix of Pasdaran and Gendarmerie infantry forces until Iranian regular artillery forces arrived in support. They did not encounter any opposition from Iranian armor and armed helicopters, and at most faced a few Iranian attack sorties per day.

This thrust seems to have been largely defensive, and directed at blocking any counterattack by the Iranian armored division at Kermanshah. If so, it succeeded in guarding the the main route to Baghdad from Tehran, and the main route near the frontier which connects southwards to Gilan Gharb and Ilam. It also gave Iraq access to routes to several Iranian towns near the border, including Naft e-Shah, Sumar, and Mehran. Nevertheless, it left the Iranian division at Kermanshah intact, and gave Iranian forces ample time to regroup.⁸

⁷ Reports differ on the size of this force. Some say it was only one division plus a brigade in support.

⁸ Edgar O'Ballance, The Gulf War, London, Brassey's, 1988, p. 33.

In the center, an Iraqi armored division and additional supporting forces advanced towards Mehran, with one wing of the attacking forces moving north towards Ilam and another to the south.⁹ These forces rapidly took Mehran, a town near the border at the edge of the mountains, and thrust towards Ilam. The Mehran area was already heavily depopulated because insufficient water existed to provide for the normal amount of irrigation.

While the Iraqi forces did encounter some successful attacks by Iranians using Cobra attack helicopters, and pop-up tactics, this resistance was far too weak to have any major effect. Iraqi forces succeeded in spreading out along a 50 kilometer front from north to south in the central sector of the front. The Iraqis then destroyed most of the villages in the area and their dam and irrigation system, and expelled most of the Iranians in the area. This thrust shielded Iraq against any Iranian attempt to penetrate into its road system near the border at Kut, and shielded the southeastern approaches to Baghdad.

The Iraqi Army's main offensive thrust was in the south. Three armored and two mechanized divisions attacked along a broad front from Musian to Khorramshar. Two armored divisions, with a mechanized division in support, attacked Dezful and Ahwaz. Another armored division, with a mechanized division in the rear, thrust towards Abadan and Khorramshar. These forces were supported by special forces units and at least one independent brigade, and sought to conquer the entire "Abadan Island". The Iraqi infantry and armored forces in this southern attack included six of Iraq's nine most effective brigades. The attack not only thrust towards the "Arab" population of Khuzistan, it led it towards Iran's main refinery and oil facilities.

The armored division that led the northern part of this attack was stripped of its infantry to increase its speed of movement and attacked as separate brigade sized elements. It soon took much of the territory around Musain and Bustan, and slowly moved across the Kharkeh river, which was fordable at this time of year. It then moved towards Shush. Part of this Iraqi attacking force was in a position to move towards the main Iranian air base and command center at Dezful, but never did so.

Other elements of the main Iraqi attack in the south thrust across the frontier south of Qalat Salih, through Hoveyheh and entered Susangerd on September 28th. Susangerd was undefended, and the Iraqi force moved on towards Dezful and Ahwaz without securing its rear or leaving a garrison in Susangerd. To the south, Iraqi armored forces crossed the Karun River, and entered the outskirts of Ahwaz and Khorramshahr. Ahwaz was the main administrative center for Iran's oil industry and the location of one of Iran's armored divisions. The remaining Iraqi armored division crossed the Tigris at

⁹ Some reports indicate an infantry division.

Kharkiya and reached Khorramshar on September 28. Iraqi artillery had begun to heavily shell the Iranian refinery complex at Abadan on the first day of the war, and Iraqi Army forces now threatened to seize all of the major cities in southwestern Iran.¹⁰

4.2.4 Iran's Initial Failure to Organize Effective Opposition

If Iraq had been more aggressive and had been better prepared to attack Khorramshar and Abadan, it might well have succeeded in taking these all of these Iranian cities, and possibly much of Khuzistan. The Iranian forces near the border were poorly prepared to resist the Iraqi thrust into Southern Iran, although small elements of the Iranian air force immediately began to attack the advancing Iranian fighters and struck at Basra and Wasit.

On September 22, 1980, Iran's regular army deployments in the entire border area consisted of (a) one infantry division posted near Urumiyeh in the far north, (b) an infantry division at Sandaj, reinforced by Pasdaran, and covering the threat from Iran's Kurds, (c) an armored division farther south in Kermanshah with a brigade at Qasr e-Shirin, and (d), an armored division at Ahwaz tasked with the defense of Khorramshahr and Abadan, and which shielded the Iranian air base at Dezful. Iran did, however, deploy most of a battalion to Mehran just before the war began. One more Iranian armored division, and an one airborne division, were in reserve. When Iran did begin to move the rest of its divisions forward in October, there were so many transportation problems that it took six weeks to get an infantry division from Mashad to a position near Khuzistan.¹¹

These Iranian divisions had a substantially larger authorized manpower and equipment strength than Iraqi divisions, and Iran would have had a relatively strong defense force if its divisions and support forces had been at anything like their full authorized strength under the Shah. As has been described in the previous chapter, however, the regular Iranian Army had suffered at least a 30 percent desertion rate since the fall of the Shah. Many enlisted men, NCOs, and officers had deserted, and Iran had purged at least 12,000 men from its regular military. Most combat units had only 30-50% manning.¹²

As for the rest of the Iranian Army, roughly 140,000 Iranian military personnel had deserted during the course of the revolution, cutting the strength

¹⁰ Estimates of the size of the Iraqi forces used differ sharply. These estimates are modified from the IISS, Strategic Survey, 1980-1981, London, IISS, pp. 49-52.

¹¹ Estimates of the size of the Iranian forces in 1980 differ sharply. These estimates are modified from the IISS, Strategic Survey, 1980-1981, London, IISS, pp. 49-52.

¹² Claim by then President Bani Sadr, FBIS/MEA, *Daily Report*, October 15, 1980, I-12. A Rand expert estimated that by 1986, some 23,000 men had been formally purged from the Army, some 17,000 of which were officers. Nikola B. Schahgaldian, The Iranian Military Under The Islamic Republic, Santa Monica, Rand R-3473-USDP, 1987, pp. 26.

of the regular armed forces from 260,000 to between 110,000 and 150,000. The U.S. Embassy hostage crisis had cut Iran off from its main source of weapons, spare parts and logistical assistance. In addition, many elements of the Iranian armed forces were occupied in dealing with Kurdish insurgents, or stationed along the Soviet border.

Many of the support functions in Iranian forces had virtually disintegrated. Other support and logistic functions were under the control of different, and sometimes competing, revolutionary organizations. Iranian logistics were in a near state of chaos, and there was little central control of assets.¹³ The Iranian Army had lost so many critical technical personnel that a number of specialized combat and support elements could barely function. As a result, the regular Iranian army could only provide a poorly coordinated defense during the first weeks of the war. Most Iranian units rapidly encountered serious technical, repair, or support problems and lost the ability to use much of their armor, heavy artillery, or attack helicopters after the first few weeks of combat.

Iran's new revolutionary forces in Western Iran also were scarcely ready for war. Although Iran's President, Bani Sadr, had called for the full mobilization of all forces and military reservists on September 20, and Iran had announced it was deploying the regular army to the border and mobilizing 150,000 popular reserves on September 21, few of these forces were even in motion when the Iraqi Army entered Iran. Iran was still in the early stages of transforming its *Pasdaran*, or Revolutionary Guards, into a serious alternative to the Army. This meant Iran had to react to the Iraqi invasion by mobilizing massive numbers of new popular volunteers into a highly diverse and disorganized mix of regular, revolutionary, and rapidly mobilized units.¹⁴

This left much the initial defense of much of Iran's territory in the central and southern border areas to Iran's paramilitary forces, a few scattered regular army brigades, and only 12,000-30,000 men in the *Pasdaran*. The *Pasdaran* forces, however, were better deployed and organized to deal with domestic opposition than the threat from Iraq, and had relatively young officers and NCOs. Their military experience consisted largely of training as conscripts in the Shah's army or low level fighting against Khomeini's opponents or hostile ethnic groups

¹³ Views differ over whether the computerized logistic system the Shah had purchased was sabotaged during the revolution or simply never was functional. One American advisor involved stated that the computer hardware existed, and that stocks were computer coded, but that the software in the system never functioned.

¹⁴ The *Pasdaran* or IRGC were formally established by Khomeini on May 5, 1979. They grew out of elements that had seized arms in February, and began to emerge as an effective force in November. Estimates of their strength differ sharply. One estimates puts it as 4,000 in May, 1979; 10,000 by December, 1979; 25,000 by mid-1980; 50,000 in 1981; 150,000 in 1983; 250,000 by 1985, and 350,000 by 1986. It is likely, however, that their strength exceeded 50,000 to 80,000 men by late 1980, although not in regular formations.

like the Kurds. The Pasdaran forces and rapidly mobilized volunteers were just beginning to convert to heavy weaponry, and many elements had to fight largely with light infantry weapons and with "Molotov Cocktails."

FIGURE 4.1 (Old 4.2)

IRANIAN-IRAQI DEPLOYMENTS DURING THE IRAQI INVASION

4.3 Iraq's Failure to Exploit Its Initial Success

It is not surprising, therefore, that Iran did so little to resist Iraq's regular forces during the period from September 22 to September 28. At the same time, Iraq failed to exploit its initial successes in the land fighting, and halted for nearly five days following its initial penetration into Iran. The precise reasons for this Iraqi pause are unclear. Iraq has since claimed that it paused because its objectives were limited and it was seeking a peace settlement. It is far more likely, however, that Iraq's attack paused because of sheer disarray at the command level.

Some of the Iraqi combat elements that invaded the South penetrated into key cities and objectives, and had to withdraw because other units fell behind and did not provide proper support. The Iraqi Army lost concentration, cohesion, and momentum as it advanced, and combat and service support elements did not thrust forward aggressively. Iraqi commanders exhibited little understanding of the critical importance of speed, maneuver, and of the need to exploit the shock value of armor. They rarely risked bypassing an objective or opposing forces. Some combat elements halted when they met relatively light opposition, and Iraq showed little ability to maneuver its armor or use its air power.

Iraq may have simply expected Iran's forces and revolution to collapse. Iraqi planners were fully aware of the weaknesses in the Iranian Army. Several Iranian generals were then in Iraq, and may have told Saddam Hussein to believe that the Khomeini regime was far more fragile than it really was. In any case, Iraq's "pauses" gave Iran time to call up and deploy massive numbers of revolutionary reserves, and gave its regular and revolutionary forces time to deploy forward, to establish defensive lines, and to dig in.

These Iraqi behavior patterns are scarcely unique to the Third World. At the same time, these patterns reflect problems which are much more severe in Third World countries, and they provide an important lesson about both the vulnerability of Third World states and their probable actions as allies.

4.4 The Oil War Begins

An equally important development took place during the first few days of the war whose full strategic implications only became clear much later. When the war began, oil prices were at a near record high. Iraq was exporting about 3.0 to 3.4 MMBD and Iran was exporting about 1.4 to 1.6 MMBD. Both nations depended on oil for most of their export earning and, indeed, for their economic survival.

All oil exports from both countries ceased, however, on the first day of the war. Regardless of what Iraq's original intentions may have been, the war

immediately escalated all along the Shatt al-Arab. The Iraqis seem to have started this escalation with artillery attacks on the oil facilities at Abadan, and virtually all of the more than 150 oil storage tanks at Abadan were destroyed or burning by the second day of the war.

Both sides then launched a limited number of air raids against the other's oil facilities, although with little initial effect. Iraq launched its first strike on Iran's oil terminal at Kharg Island on 24 September, 1980. The Iraqi attacks had some strategic impact on Iran. **(See Figure 4.3.)** The tank farms and some of the oil export facilities at Kharg Island were damaged in the first weeks of fighting, along with some of Iran's smaller refineries, but Iraq used insufficient air strength to inflict decisive damage, and failed to repeat and follow-up its attacks. Most Iranian facilities were quickly repaired, and Iran rapidly strengthened its anti-aircraft defenses.

Both combatants continued to make sporadic efforts to use air power to destroy the other side's economic installations and particularly its oil production and export facilities. However, Iran's first air raids against Iraq's oil field and facilities involved very limited numbers of sorties and had as impact as Iran's air attacks against Iraq. Some storage tanks burned, some facilities were closed, and Iraqi production dropped, but the overall impact on Iraq's oil export capacity was negligible. Iran did launch larger air raids against Iraq's oil facilities at Kirkuk and Sulimaniyeh on October 7, these too did little real damage.

Iraq retaliated with its first air attacks on Iranian shipping, but most of these attacks took place around the port of Bandar Khomeini, which was at the head of the Gulf and close to the war zone. Iraq's air strikes did not affect Iran's crude oil shipments which came from ports lower in the Gulf. Iraq did destroy some oil tanks in Tehran on October 16, but it did not launch its first major air strike against Kharg Island until December 24.

Other forms of combat damage to the oil facilities on each side proved to be far more serious. Iran started a blockade of the Shatt al-Arab and Basra on the first day of the war, and used artillery fire to shut down the Iraqi oil loading facility at Al Faw. Some 62 ships and tankers were rapidly trapped or sunk in the Shatt, and the waterway was extensively mined. Six more ships were trapped in the Khor Abdullah, and Iranian aircraft sank several of these ships to help block the channel on October 6, 1980.¹⁵

Iran then used artillery and naval gunfire, and naval commando raids, to attack Faw and to seize the Iraqi oil loading points in the Gulf at Mina al-Bakr and Khor al-Amaya. It launched these attacks during September 23 and 24, and again on September 29. As a result, Iran succeeded in destroying both of Iraq's

¹⁵ Lloyds had to write off virtually all 68 ships as losses several years later.

oil loading points in the Gulf and much of Faw's ability to function. Iran artillery fire also damaged some of the petrochemical facilities around Basra, and the Basra refinery was forced to close.

The strategic importance of this damage was not clear at the time. Iraq had immense hard currency reserves when the war began, could export through pipelines to Syria and Turkey, and seems to have felt it would be able to resume exporting through the Gulf in a matter of weeks or months. Iran, in contrast, seemed to be far more vulnerable. Its refinery at Abadan fed much of its domestic market, and other supply disruptions and air attacks reduced the output of its refineries at Shiraz, Tehran, and Kermanshah to less than half their normal capacity. Iran began to experience serious fuel supply problems during October, which is the beginning of winter in parts of Iran,.

In actual practice, however, Iran proved to be less vulnerable than Iraq. Iran retained the option of redirecting its crude oil exports through pipelines far to the east of the battlefield. In contrast, many of Iraq's critical facilities were in the forward area. As a result, a relatively limited amount of Iranian air strikes and artillery fire destroyed or shut down enough of Iraq's refinery and gas production to force Iraq to introduce rationing by October. Iranian air raids led Iraq to temporarily stop pumping from the Kirkuk field on October 13, 1988, and Iran forced Iraq to make major power cuts in December, when Iranian air strikes damaged the Iraqi power plants at Harthya and Nasirya.

4.5 The Battle of Khorramshahr: Iraq's Invasion Slows to a Crawl

Iraq had another painful shock during October. Iraq may have expected Iran to begin to sue for peace the moment Iraq achieved its initial gains. If so, Iraq was badly mistaken. Iran immediately made it clear that it had no intention of suing for peace and Khomeini and his supporters stated they were ready for a prolonged war that would result in Saddam Hussein's overthrow. These words soon proved to be more than rhetoric. The battle of Khorramshahr, however, showed that the Khomeini government was not only able to survive Iran's initial defeats, but that that Iran could put up serious resistance to Iraqi forces.

While an Iraqi armored division reached the outskirts Khorramshahr within a matter of days, it waited while Iraqi artillery was used in an attempt to "soften up" the city. This artillery fire did little other than arouse the populace and create added barriers to the movement of Iraqi forces. When Iraqi armored forces finally entered the city of 70,000 people on September 28, they encountered Iranian forces equipped with rocket launchers and Molotov cocktails that were willing to fight street by street through the city.¹⁶

¹⁶ The descriptions of Iranian cities are taken from notes during the author's travels through Iran and the Hachette guide to the Middle East.

The Iranian forces only seem to have consisted of about 2,000 regular Army forces and several thousand Pasdaran. Nevertheless, Iraq rapidly found that it could not send tanks unescorted into the city and sent in infantry support.¹⁷ This new attempt to attack Khorramshahr failed because neither the Iraqi armored or infantry forces involved had any real training in urban warfare. They moved far too cautiously in maneuvering through the less defended parts of the city and repeated became the victims of Iranian ambushes. Neither Iraqi armor or infantry conducted aggressive reconnaissance and both tended to wait until massive firepower could be brought to bear. Iraq was forced to slowly secure the perimeter of the city with the armored division it had initially committed to the attack and then rush a special forces bridge and Republican Guard brigade through a quickly improvised course in urban warfare.

This process took several weeks, and Iraq lost as many as 2,000 killed and 6,000 wounded as it committed its forces piecemeal to a battle that required a coherent mass attack.¹⁸ Iranian regular army and Pasdaran units had time to reinforce the city. Both groups of Iranian forces also fought Iraqi troops with great determination, although there were reports that Pasdaran and Hezbollah elements shot regular army troops that attempted to retreat.

Even though Iraq first claimed to have fully secured Khorramshahr on October 13, 1979, Iranian patrols continued to move through the city. Iraq only really gained real control over most of the city on October 24. The end result of this battle was that Iraq and Iran suffered 8,000-12,000 killed and seriously wounded, and Iraq lost roughly 100 armored vehicles. Much of Khorramshahr was destroyed, and Iraq found that it took nearly a month for its forces to secure a city that was initially defended by the equivalent of a few poorly equipped Iranian infantry battalions.

The battle for Khorramshahr also stalled the Iraqi assault on the much larger city of Abadan, and the refinery complex in Abadan island, for nearly two critical weeks. While Iraq shelled Abadan from September 22 onwards, using positions across the Shatt al-Arab, Iraqi forces did not begin to surround the city and island until October 10. This delay proved critical because Iran was able to reinforce a city located on a natural island which was separated from Khorramshahr by the Karun River and which had the Shatt al-Arab on its West and the Bahmanshir River, a tributary of the Karun, on its West. By the time Iraq attacked, there were as many as 10,000 regular troops in the city, including a mechanized brigade, a mechanized battalion, a naval unit, and an

¹⁷ Sepher Zabih, The Iranian Military in Revolution and War, London, Routledge, 1988, pp. 172-173.

¹⁸ Sepher Zabih, The Iranian Military in Revolution and War, London, Routledge, 1988, pp. 172-173.

armored unit with 50 tanks, and up to 5,000 Pasdaran.¹⁹ There also were massive saltwater marshes to the southeast. This made it almost impossible for Iraq to secure the island against reinforcement once it became involved in a prolonged battle.

Iraq began its attack on Abadan by sending a mechanized division far enough to the north of Khorramshar so that it could cross the the Karun River, come down the road on the east bank of the Karun, and cut off Abadan from Ahwaz and the road to Bandar e-Mashahr and Bandar Khomeini. The key to this Iraqi movement was a difficult river crossing that demonstrated that Iraq's military engineers could be highly effective, even if its combat arms were not.

Iraq tried to achieve surprise during its river crossing, and to minimize casualties, by only working on the bridging operation at night and by only allowing military movements to take place at night. This meant Iraqi engineers had to conceal their operations during the daytime. They also had to cope with the fact that the Karun River had high muddy banks, and the approaches to the bridge required considerable work. Even so, Iraqi engineers put a pontoon bridge across the river on the second night, and the entire Iraqi division had completed its crossing on the fourth night. While Iraq's insistence on night operations did delay the completion of the crossing until October 14, the wisdom of this delay is indicated by the fact that the bridge was later destroyed by Iranian aircraft and helicopters.

The Iraqi force secured the northern road to Ahwaz on the 15th, after a brief skirmish with advancing Iranian armored forces. Iran lost roughly a battalion's worth of armor when an Iraqi ambush forced the Iranian unit to move into the mud off the road and it bogged down and the equipment had to be abandoned. The rest of the Iraqi mechanized division moved southwards along the east bank of the Karun River without significant opposition, and surrounded all of Abadan Island but its southern end by October 16.²⁰ The Iraqi force could not fully secure the island because the salt marsh at its southern end is untrafficable by military vehicles and can be reached by boat.

¹⁹ Sepher Zabih, The Iranian Military in Revolution and War, London, Routledge, 1988, pp. 172-173.

²⁰ The terrain involved is complex, and the reader may wish to consult Defense Mapping Agency map ONC H-6 for the details. The terrain in the region varies sharply according to rainfall and the resulting seasonal flooding. The Iraqi division moved across the border along roads that lead east towards Ahwaz off the main road between Ash Shanin and Duwa and north of the Basra power station. It is possible to drive across the border at this point across relatively firm land and reach the Karun River fairly quickly by going east. The Karun River joins the Shatt al Arab in the middle of Khorramshar. The Shatt is roughly 300 meters wide at this point and there is solid land on both sides, with a salt pan to the west on the Iraqi side and a large salt marsh to the east on the Iranian side which is separated from Abadan Island by a river that splits off the Karun before it enters Khorramshar and the Shatt called the Bahmshehr River.

Once this operation was completed, Iraqi forces fought their way across the bridges to Abadan along three different routes. They only succeeded, however, in securing the western and central bridges. Iranian forces continued to block all access across the eastern bridge. The Iraqis did not fully secure the eastern bank of the Bahmanshir River and the road to Khosrowabad, and were reinforced and resupplied by sea.²¹ By now Iran had had nearly a month to deploy its forces to Abadan, and had built up a considerable garrison and large supplies of light weapons and ammunition.

Abadan was a city of nearly 300,000, and was even more difficult to attack than Khorramshahr. As a result, Iraq had to fight its way south and east through the city street by street. While Iraqi forces slowly reached the edge of the tank farm along the Shatt at the southern end of the city, Iraq seems to have refused to take the losses necessary to fully secure all the city and the island. Iraqi forces never occupied the southeastern end of the city or the village of Torreh ye-Bakhhak. Although Iraq sporadically claimed to have secured Abadan, the Iranian garrison remained and both Iranian small craft and helicopters were able to move to and from the island at night with relative freedom.

By mid-October, Iran had also begun to organize an effective command structure, and its Supreme Command Council began to have some effectiveness in coordinating its forces. While this did not suppress the deep divisions within Iran's forces, and particularly between the regular forces and Pasdaran, it did improve their performance all along the front. Iraq never took any other key cities or targets in Iran. It is also important to note that Baghdad failed to get a significant support from Khuzistan's Arab population. Iraq captured nearly a third of Khuzistan province during the first two months of fighting, but it never gathered any meaningful popular support. Iraq's efforts to encourage "Arab" separatism with movements, like the Al Ahwaz National Popular Front, had no meaningful impact on the war during any part of the Iraqi invasion of Khuzistan.²²

As for the fighting on the rest of the battlefield, the three Iraqi armored forces which originally invaded the south remained virtually in place during Iraq's capture of Khorramshahr and the siege of Abadan. These forces did not conduct any significant offensive operations during the rest of September and all of October, and only began to move forward in early November. By this time, however, the Iran build-up had gone far beyond simply rushing in infantry and helicopter gunships. Substantial amounts of artillery had arrived during early October and armor had followed. Shush and Dezful now had substantial garrisons and artillery forces, and Iran had built up a lightly fortified defense line

²¹ See Sepehr Zabih, The Iranian Military in Revolution and War, pp. 173-175.

²² Iraq did, however, selective drive non "Arabs" out of much of the territory it captured. The "Arabs" that remained suffered significantly when Iran recaptured the area.

along the Western bank of the Kharkheh River. Substantial Pasdaran forces had also entered Susangerd, which Iraqi forces had taken but not garrisoned, and were supported by substantial amounts of artillery.

While Iraqi forces probably still had something like a 3:1 to 5:1 advantage in most heavy weapons, they now faced parity or superiority in manpower. They also remained road and vehicle bound and continued to move slowly and to try to use artillery assaults as a substitute for maneuver. The end result was that Iraqi armor proceeded up the dry riverbed of the Kharkeh River, but halted south of Shush.

Iraq was never able to retake Susangerd, which thrust between the northern and southern part of the Iraqi advance. The forces Iraq used to attack Susangerd on November 13 and 21, 1980 had a superiority of between 6:1 and 7:1, but they never were able to break through Iran's initial defensive lines. These forces halted after the attack on November 21, dug-in, and then did little more than shell the city.

Iraqi was even less successful when it tried to advance to the south. Iraqi armored forces attempted to move south from Hamidiyeh towards Ahwaz, but Iran then flooded the area, which consisted of low fields that had once been irrigated by an ancient canal. The end result was that part of the Iraqi forced drowned, and some 150 armored vehicles were left mired in the mud.²³

By late November, Iraq had been halted on all fronts. The seasonal rains then begun and continued until February. Many of the areas that Iraqi armor had been able to use days before the rains arrived became totally untrafficable. Iranian infantry forces were able to take effective control of many of the new "wetlands" because the Iraqi Army remained roadbound and did little patrolling. Iraqi engineers did build some excellent all-weather roads from Basra to the front near Ahwaz, and connecting roads to the north and south. Iraq, however, made little attempt to fortify its positions, secure its rear areas, or create defense in depth.

The only major offensive action Iraq was to take during the rest of the year came on December 24, 1980, a day on which Iraq also launched its first major air raid against Kharg Island. Iraq sent an infantry division from the area around Panjwin in northern Kurdistan towards the Iranian town of Marivan. This attack seems to have been designed to achieve several different objectives: To help secure the Kurdish area of Iraq and the Darbandikhan Reservoir, to control the Marivan Valley, and to block any attack forward by the Iranian infantry division stationed at Sanandaj, and to aid the anti-Iranian Kurds in the KDPI, or Pesh

²³ Edgar O'Ballance, The Gulf War, London, Brassey's, 1988, p. 41.

Merga, which were still actively fighting Khomeini and which controlled a substantial part of the Kurdish area of Iran.

The Marivan area had little strategic importance to Iran and there were no significant Iranian forces in the area. As a result, Iraqi forces quickly took a roughly 300 square kilometer area, although they only secured the initial line of heights in the Zagros mountains east of Marivan. Iraq backed up its advance on January 15, 1981, by sending an Iraqi mountain division east from Halabjah, a small border garrison toward between Qasr e-Shirin and Panjwin, to seize the Iranian town of Nowdesheh. This winter attack hit a small garrison of Pasdaran and regular forces without warning and was successful in giving Iraq control of the town and the heights above the Baghdad-Tehran highway and the road nets in the area. It helped secure Kirkuk and the Darband Reservoir, and gave Iraq a position directly contiguous to the areas held by the KDPI.

Iraq gave the KDPI, which was still led by Ghassemlou, a base and training and supply center in Sunn, an Iraqi town near Halabjah. This allowed the KDPI to build up its forces to around 7,000 to 10,000 regulars and win the support of roughly twice that number of part time guerrillas. This proved to be of considerable importance during the following year. The KDPI -- in combination with the some factions of Talabani's PUK, and anti-Khomeini Kurdish Marxists-- were able to score significant gains beginning in the Spring of 1981. They were able to take a number of Kurdish towns, including Bukan, Mahabad, Saqqez, Sanandaj, and Urimayah.

Iraq's limited success in the north, however, did more for the anti-Iranian Kurds than Iraq. In fact, by the end of 1980, the Iraqi Army had established a pattern that it could not change until 1988. It generally failed to maneuver effectively, conduct effective offensive combined arms operations, counterattack and patrol aggressively, conduct active reconnaissance and intelligence operations. Iraqi forces made heavy use of artillery bombardments, and slow and careful tank movements. Iraqi forces did not try to find weaknesses in Iran's defense and thrust through them. They instead relied on surrounding and besieging major Iranian cities like Khuzistan, Abadan, Ahwaz, Khorramshahr and Dezful. Iraqi forces found it difficult both to spearhead offensive operations unless they achieved virtually complete surprise and equally difficult to commit their reserves. They moved too slowly, too little, and too late.

While the Iranian Army also had many weaknesses, it was clear after the first few days of Iraq's invasion that the Iranian revolution now had massive popular support. The moment Iraq's initial offensive momentum failed, Iraq faced a mobilized nation with revolutionary fervors and which was willing to take incredible losses. This was to give Iran a degree of military leverage which went far beyond its numbers of weapons and soldiers.

4.6 The Air Fighting During the Rest of 1980

The war in the air and at sea had surprisingly little impact on the conflict during 1980. Both the Iranian and the Iraqi air forces flew occasional attack sorties, and these often produced significant effects against highly vulnerable targets like tank farms and refineries. Both air forces, however, had serious problems in conducting large scale operations.

The Iraqi Air Force had dispersed many of its aircraft to other Arab countries after the initial Iranian counter-raids on September 23, 1980. It brought these aircraft back a week to ten days later, but then generally kept its air units out of the battle. Iraqi officers indicate there were several reasons for this limited activity. The first was that Iraqi pilots lacked the avionics, training, and air-to-air munitions to win air combat encounters with Iranian pilots. They also had little air-to-air combat training under simulated combat conditions and most of the training they did have was in fair weather and at relatively high altitudes. The second was that Iraq feared Iranian reprisals for any strategic bombing. The third was the lack of tactical target opportunities that justified risking scarce pilots and aircraft, and the fourth was that Saddam Hussein ordered that the air force be kept in reserve as an ultimate defense for Iraqi land forces and territory.

Some of these reasons seem valid. The initial air combat encounters during the first days of the war scarcely threatened the survival of the Iraqi Air Force -- Iran lacked both the numbers and battle management capability to deploy an effective air screen -- Iran consistently won the few dogfights that did occur and forced the Iraqi pilot to breakaway and flee the combat. There were relatively few hits per dogfight encounter or missile fired, but Iran also won most of the encounters that resulted in a hit or kill. By and large, both sides found it difficult to force an air-to-air encounter to the killing point and shot far more often than they hit.

Iraq also could not correct the basic problems in its ability to fly attack missions that had hurt it during the first days of the war. It had not learned to mass air power or that a repeated cycle of reconnaissance-strike-damage assessment was necessary to kill rear area and interdiction targets. It tended to launch a few sporadic sorties and to try to use claims as a substitute for actual damage. The few strategic bombing attacks Iraq did carry out at this time -- like its attacks on Iran's refineries and storage tanks in October, 1980 -- produced more smoke than long term damage.

Iraqi fighters also found it extremely difficult to find meaningful targets for close air support. Iran's land forces were largely irregular formations deployed in dug in or urban areas and which generally only moved at night. It was difficult to find a target where an attack fighter could score a meaningful kill and minor losses of infantry and support vehicles were not worth risking air planes.

Iran's success during the first days of the war, and ability to fly over 100 sorties on the second day of the war, gave Iraq an exaggerated picture of

Iranian air capabilities that was to last for some time. Iraq concluded that it was as vulnerable to urban and key facility attacks as Iran, and potentially more vulnerable to attacks on its air based because of its lack of strategic depth. Iraqi planners were also surprised by the virtually ineffectiveness of their Soviet-made radar net and surface-to-air missiles against low altitude Iranian attacks.

The USSR made some of these problems worse by refusing to support Iraq's attack on Iran, withdrawing some of its advisors, and refusing to offer Iraq any technical solutions to the problems in either the Iraqi Air Force or Iraq's land based air defenses. Iraq not only could not improve its air power, it could not improve its command and control net or obtain more SA-6s -- the only major Soviet system it had with a low altitude kill capability. Iraq had begun the war with only about 25 SA-6 fire units.

This suddenly forced Iraq to try to find its own substitutes for effective area defense. Iraq deployed AA guns, provided earth mounds and sand bags for key facilities and bought short range surface-to-air missiles for the point defense of key economic and military targets. These measures were somewhat successful, although Iranian F-4s continued to overfly Baghdad as a threat of what Iran could do in an intensive air war, bombed Iraq's nuclear reactor at Tuwaitha on September 10, 1988, and even struck at one of Iraq's most western air bases deep in Iraqi territory.²⁴

Iraq never succeeded in creating an effective national area air defense capability that could operate below medium altitude during the rest of the war, and it was Iran's rapid loss of operational air strength -- not Iraq's air defense -- that ultimately protected Iraq. In fact, if Iran had retained its ability to use the Shah's air power, it might well have been able to do enough damage to Iraq's oil facilities to cripple Iraq in spite of the massive economic aid it later got from Kuwait and Saudi Arabia.

Iran, on the other hand, lost most of operational air strength by late 1980. It still had sufficient pilots, but its remaining ground crews could not operate effectively without U.S. technicians and support. The F-4 and F-14 proved to be particularly difficult to keep fully operational. While Iran did not need to use the F-14 extensively, it did have to use the F-4. The F-4, however, presented maintenance problems even in U.S. hands. It needed some 35 man hours of maintenance per flight hour, and the Iranian air force simply could not handle the resulting burden.

²⁴ Views differ sharply over whether Israel played any advisory role in this raid, and whether it damaged either the Tamuz I or Tamuz II reactor. The Iraqi air defenses seem to have been totally inactive during this raid, but only two Iranian F-4 aircraft were involved and it is doubtful they did much damage. Israel successfully destroyed much of the installation some eight months later on June 7, 1981.

The collapse of Iran's logistic system created a situation where it could not assemble all of the spare parts it needed to maintain readiness without cannibalizing or "vulturizing" its aircraft, and this created a vicious cycle where more and more aircraft had to be stripped of a few key parts to keep the others flying. Iran's lack of access to Western parts made this situation steadily worse, as did later purges of the Iranian Air Force. Its operational air strength dropped to a peak level of less than 100, with less than one sortie per day of sustained capability, and Iran never was able to rise above this level until the end of the war.

As for combat helicopters, Iraq began the war with limited strength, and more emphasis on transport missions than attack missions. It tended to use attack and armed helicopters more as flying artillery or cavalry than in close support attacks. Unlike the Iranians, who used the deep penetration, earth-hugging, and pop-up techniques the U.S. had pioneered in Vietnam, the Iraqis tended to stay near their own lines, come in like fighters, and fire from a distance. Iraq also made too much use of helicopters for mobility. It failed to garrison or occupy areas where troop presence was critical for physical security and to establish control over the area. Iraq could, however, keep most of its helicopters flying. If it never really used its helicopters as effectively as it should have, it could at least deploy between 60 and 70% of its helicopter strength on any given day.

Iran had very different problems in using its helicopters. Its helicopter force of nearly 800 helicopters had 205 AH-1J attack helicopters which were organized to act as a "force multiplier" which was supposed to have an armor kill capability equal to that of up to two armored divisions. The Iranian army was also supposed to have air mobile forces capable of extensive offensive operations. In fact, however, the Shah's helicopter forces had very limited overall effectiveness even before his fall.

Iran did retain a number of skilled American-trained pilots and ground crews, and these often were very effective in operating in small numbers during the first years of the war, but even under the Shahm, Iranian helicopter forces had never been able to operate in large scale formations except in set piece demonstrations with massive Western support. Iran's helicopter force also generally required even more maintenance and resupply of parts than its fighters during the period before the Shah's fall, and these forces had rapidly degenerated in readiness and sustainability once the U.S. withdrew its technical support and cut off re-supply. The Iranian Army was soon forced into the same cycle of cannibalization or "vulturization" in using its helicopters as the Iranian Air Force had been in using its fighters, and the army helicopter force was never able to recover from its initial problems and operational liabilities.

This experience raises several lessons about air power in Third World states which may be obvious, but which seem to be consistently ignored in practice:

- Command organization, battle management capability, command and control, and targeting and damage assessment capability are as important as air strength and technology.
- Dependence on foreign support and resupply can be crippling unless that support and supply is absolutely assured.
- Air power is only as real as training and exercise experience allow, and as the ability of a given country to adapt its tactics, technology, and command systems to local conditions permit. No air force can be effective that had not thoroughly exercised and tested its operational concepts.
- Peacetime air forces and air defense forces tend to grossly over-estimate both their killing power and defense capabilities.
- It is far more difficult to create an effective fighter and surface-to-air missile defense system than is generally realized, both for technical and battle management reasons.

4.7 The Naval War Fighting During 1980

Little use was made of seapower after the closing of the Shatt al-Arab and Iraq's loss of its oil export terminals in the Gulf. In spite of the revolution, Iran could still deploy most of its ships and at least three of its P-3F Orion maritime patrol aircraft. Iran proved this during its naval attacks on Iraqi gun boats in the Shatt and on Faw during the first few days of the war, and again when it conducted an amphibious raid on Faw on September 28-29, 1980.

By the end of September, Iranian ships and aircraft dominated the upper Gulf and Iraqi waters. All shipping to Iraq halted, and the Southern Gulf states had not begun to provide aid to Iraq or extensive transshipment facilities. Iran already had enough troubles with the West because of the Iranian hostage crisis, and had little reason to attack non-Iraqi shipping as a means of putting pressure on other states.

Iraq began the war without any detectable naval strategy and lacked any serious surface warfare capability. Its new Western-made ships were still under construction and its obsolescent Soviet-made missile patrol boats were technically inferior to Iran's Western made missile ships, and had poor readiness and operational training. In fact, Iraq was so conscious of its naval inferiority that it has sought assistance from two Western navies during 1978 and 1979 in an attempt to improve the training and readiness of its naval forces. The Iraqi Navy

rapidly retreated to Umm Qasr, Basra, and the Khor Abdullah waterway during the first days of the war, and never sent significant forces into the Gulf until the 1988 cease-fire.

The Iranian Navy did, however, play an important role in supplying Abadan Island and in evacuating casualties. It also exercised its rights to interrogate and search ships that might be carrying military cargos or contraband to Iraq. Iran also created an "exclusion zone" in the Gulf on October 1, 1980, that roughly paralleled its offshore oil rights. This zone effectively blockaded Iraq.

As for the use of air power in naval combat, Iran did bomb several ships early in the war, but had no further incentive to do so. Iraqi aircraft did strike sporadically at Iran's western ports, but never in sufficient strength to have great effect. Iraq could not use its air force as a substitute for ships because it had not organized, trained, or equipped its air force for naval warfare. It lacked any maritime patrol aircraft, and had no aircraft equipped with air-to-ship missiles. While it could probably have used rockets and iron bombs against Iran's combat ships, these had relatively modern air defenses. Its lack of a maritime patrol aircraft also meant that it could not provide effective naval surveillance and targeting, and at this point in the war, Iraq seems to have been unwilling to take the chance of attacking naval targets that did not fly Iranian flags.

4.8 The Role of External Powers

Both Iraq and Iran began the war in a state of near alienation from their respective major military suppliers. Iran suffered most from this alienation had virtually severed all relations with the U.S. over the Iranian hostage crisis, and the U.S. cut off all technical support and resupply.

The U.S. also reacted strongly to the risk the war presented to the West's oil supplies and to some initial Iranian threats to blockage the Straits of Hormuz in retaliation for Arab and Western aid to Iraq in launching its invasion. At Saudi Arabia's request, the U.S. deployed an AWACS force called ELF-1 to Dhahran Air Force Base on September 30, 1980. It sent four E-3As, two KC-135 tankers, and 300 support personnel. This force allow Saudi Arabia and the U.S. to obtain long range air defense and maritime surveillance, and a major command and data display center was sent up in an underground bunker at Dhahran. This deployment later became the nucleus of all the U.S. air surveillance capability in the region, and remained in Saudi Arabia during the entire length of the war.

While President Bani-Sadr attempted to defuse some of the tensions with the U.S. by declaring that Iran would not blockade or mine the Straits of Hormuz, he was not successful. The U.S. deployed a major surface task force to the Gulf area in mid October. This included two aircraft carrier battle groups, some 35 warships, and over 160 combat aircraft. The U.S. also deployed a small Marine assault force on an amphibious assault ship on October 26, 1980. The UK sent

a small task force called the Armilla Patrol, that included a missile destroyer, and strengthened its advisory team with the Omani Navy and at Goat Island in the Straits. The French strengthened their Indian Ocean force and presence at Djibouti, and Australia sent a combat ship as well. The Soviet squadron in the Indian Ocean was reinforced to a peak strength of one ASW carrier, three destroyers/frigates, three submarines, a naval assault ship, and several support ships.

Iraq did little better in dealing with the USSR than Iran did in dealing with the U.S. Iraq had long been at odds with the USSR over the Ba'ath crackdowns on the Iraqi Communist Party and Iraq's growing shift towards military and civil trade with the West. The USSR had also begun to court Iran almost immediately after Khomeini's rise to power, and was actively supporting efforts by Iran's Tudeh (Communist) Party to expand its influence in Iran. As a result, the Soviet Union responded to Iraq's invasion by immediately declaring its neutrality and an embargo of all arms shipments, and even recalled its shipments to Iraq that were then at sea.

The Soviet Union was careful to allow Eastern Europe to continue to provide Iraq with a limited number of arms and spares via the port of Aqaba in Jordan, but it did not ease its own embargo on arms sales to Iraq. Although the Iraqi Minister of Defense, General Khairallah and then Tariq Aziz rushed to Moscow, and King Hussein personally appealed to the USSR for the resumption of arms shipments in early October, the Soviet Union rejected these appeals. While the USSR did quietly ship some parts, munitions, and other items to Iraq in the months that followed, it did not officially change its arms supply policy until 1982, when Iraq was forced onto the defensive and Khomeini ruthlessly suppressed the Tudeh Party and expelled a number of Soviet diplomats from Iran.

Other powers, however, took sides more actively. Syria, Libya, and the PDRY came out in support of Iran, and Algeria tilted in Iran's direction. Israel also began to covertly support Khomeini both out of the fear of an Iraqi victory and out of concern over the treatment of Iranian Jews. North Korea and a number of Western European nations also quietly offered to sell arms to the Iranian government.

Syria and Libya began to supply Iran with Soviet made SA-7 manportable surface-to-air missiles and Sagger anti-tank guided missiles during the first ten days of the war, and Israel soon provided air supplies like parts and tires for Iran's F-4s. Iran was soon flying its aircraft to Syria and Libya via Greece and Turkey and receiving Israeli shipments via Cyprus. Other arms seem to have arrived over land via Turkey and Pakistan, although Turkey formally embargoed all arms shipments to both Iraq and Iran.

As for Iraq, it received immediate support from virtually all the Gulf states and from Jordan.²⁵ Both Kuwait and Saudi Arabia agreed almost immediately to increase their oil production and market the increase for Iraq, with the oil to be repaid after the war. Kuwait "mobilized" its armed forces on October 5, 1980, and began to rigorously enforce new regulations requiring all foreigners to register their religions as a means of identifying (and later expelling) Iranian and other Shi'ite supporters of Khomeini. Jordan went further and offered Iraq volunteers, supplies, and a shipping route through Aqaba.

Iraq also did not face any cut-off of European supplies. France stated that it would continue to ship all the arms ordered as part of Iraq's \$1.6 billion arms deal with France, including 60 Mirage fighters, radars, air-to-air and air-to-ground missiles, and anti-tank weapons. It also immediately agreed to expand these orders to include light surface-to-air missiles, and to expedite helicopter and artillery deliveries. Other European suppliers also agreed to rush arms deliveries, as did North Korea and a number of other Arab states. While the precise date cannot be determined as to when Iraq first covertly turned to Egypt for arms, in spite of Egypt's peace treaty with Israel, Iraqi officials seem to have visited Egypt no later than November, 1980.

These developments rapidly gave the war both a region-wide and international character. So did various early efforts to reach some kind of ceasefire or peace. President Zia of Pakistan led the first peace mission to Iraq and Iran, on behalf of the Islamic Conference on September 27, 1980. The end result, however, was no more productive than the call of Dr. Kurt Waldheim, the Secretary General of the UN, for a cease-fire on September 23.

As for other peace efforts, the UN Security Council agreed to Resolution 479 calling for a cease-fire on September 28. Secretary General Waldheim called for Iraq and Iran to allow the ships trapped in the Shatt to escape on October 10, and the Security Council requested that Dr. Waldheim send an envoy to both sides on November 4, 1980. The other Gulf states attempted their own peace initiatives, as did Algeria, the PLO and members of the Arab League. Breznev called on September 30, and Swedish Prime Minister Olaf Palme visited Tehran and Baghdad in November 1980 and February 1981.²⁶

The peace efforts during the first months of the war revealed that Iraq and Iran were more interested in using peace initiatives for self-justification and self-

²⁵ Iranian news service reports that Bahrain, Qatar, Saudi Arabia, and the UAE agreed on September 20, 1980 to provide Iraq with all its military and non-military requirements do not seem to be true. Interviews in the region do indicate that Saddam Hussein may have "consulted" with individual heads of state, but there is no evidence he obtained anything like the blank checks that Iran later claimed.

²⁶ For a more detailed discussion, see "The War in the Gulf: International Mediation Efforts", London, Royal United Services Institute, September, 1987.

advantage than anything else. Iran made it clear that it was committed to going on with the war unless Iraq agreed to terms that virtually amounted to surrender. These terms included an admission of Iraqi war guilt, Saddam Hussein's removal from power, surrender of Iraqi arms, Kurdish autonomy, and Iranian control over Basra until Iraq paid reparations. Iraq insisted an agreement that would have ended all Iranian attempts at subversion and political action in Iraq, Iraqi control over the entire Shatt, and Iraqi control over the border area and possibly part of Khuzistan.