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This paper, written as part of the Gray Scholar's Educational Wargame Program, establishes context for the Battle of Dezful wargame. It provides a brief history of the war, conflicts leading up to the battle, the armies involved, a description of the battle, the impacts of the battle, and finally the conclusion of the war. The paper goes further, describing theoretical choices which may have influenced the outcome of the battle. This paper is one of three which supports the student developed wargame.

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Command and Staff College
Marine Corps University
2076 South Street
Marine Corps Combat Development Command
Quantico, VA 22134-5068

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AUTHOR:

Major Keith I Toucey III, USMC

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Mentors: Dr. Paul Gelpi and Dr. Craig Hayden

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United States Marine Corps
Command and Staff College
Marine Corps University
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EXECUTIVE SUMMARY

Title: The Iran-Iraq War: Battle of Dezful

Author: Major Keith I. Toucey III, USMC

Thesis: The essay suggests that if Iran had appropriately evaluated the operational situation, adequately collected intelligence, and planned for logistics and supporting fires more effectively, they could have prevailed in the Battle of Dezful and potentially ended the war.

Discussion: In January 1981, Iran initiated a counter-offensive against the invading Iraqi forces in an attempt to regain control of several captured cities, and turn the tide of the war. However, Tehran decided to disregard the recommendations of military advisors and conducted the operation several months earlier than suggested. Thus, the operation was initiated during the wet season and before forces could be properly formed and prepared for the operation. Despite this, the operation had the potential for success with the element of surprise on Iran's side as Iraq expected operations to be slowed to a defensive posture during the wet winter months.

Despite the early possibility of success, Iran would commit a series of mistakes which would doom their forces to a catastrophic failure.

Conclusion: Ultimately, the decision to conduct the operation early was a result of politics and quarreling between the Iranian Army and the Army of the Guardians of the Islamic Revolution. This paper, which is written in support of an educational wargame, will describe the events leading up to one of the largest armored battles in history, review the mistakes made by the Iranian forces which guaranteed their failure, and then evaluate opportunities which might have changed the outcome of the battle.

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Introduction

In early January 1981, Iranian leadership executed a plan designed to regain territories that had been captured by the invading Iraqi forces in the preceding four months. Despite the advice of military leadership, the operation was launched months earlier than desired. Doomed from the start, the attack would be conducted on poor terrain, canalizing the Iranian force and preventing necessary maneuver. Compounding the issues, logistical considerations and fundamental tactics were disregarded.[1] This essay, written in support of an educational war game oriented at the tactical level of war, will look to determine how a military force may draw lessons from this battle and utilize them to teach maneuver, intelligence, and logistics , and, in doing so, highlight the importance of incorporating each in operational planning. If Iran had appropriately evaluated the situation, conducted better intelligence gathering, and planned for logistics and fires in support of maneuver adequately, then they may have prevailed in the operation, potentially ending the war seven years earlier. Ultimately, it was another seventeen months before the opportunity for the war to end was presented, but in the end, it was nearly another seven and a half years before the war would end.[2]

The purpose of this essay is to establish an understanding of the events which led to the battle and the forces which participated, in support of the playing of the educational wargame. To do so, the following literature review will evaluate the origins of the conflict and what caused Iraq to invade Iran. Additionally, it will define the battle space, evaluate the individual armies from both countries, and look at the four days of battle, as well as the effects the battle had on the war. Finally, the essay will provide considerations which might have changed the outcome of the battle.

Literature Review

The Battle of Dezful involved more than 650 tanks and hundreds of armored personnel carriers of various types and remains one of the largest armored battles in history. Flawed from its conception, the battle, which was part of the larger Operation *Hoveyzeh* (named after the small town that was the overall objective for the counteroffensive), had the potential to be successful, despite the challenges it faced.[3] However, due to turmoil within the country stemming from the earlier Iranian revolution, there was no clear or agreed upon strategy for the new government in Tehran. Further complicating their military efforts was the fighting between the Iranian Army and the Army of the Guardians of the Islamic Revolution (Revolutionary Guard or *Pasdaran*). The later was loyal to the Ayatollah and the regime, and resulted in unproductive competition between the two armies and cost valuable resources along the way.

As Pierre Razoux points out in his book, *The Iran-Iraq War*, under normal circumstances, Saddam Husain would not have sought war with Iran. Iran's population was four times the size of Iraq's and was younger, allowing for a larger reserve of troops. Moreover, Iran's military budget was 60 percent greater than that of Iraq, but because of their wealth as a nation, it was less of a drain on their GDP (4 percent versus 6.5 percent). As would be expected, Iraq had a smaller army, 250,000 compared to 290,000 in Iran. Potentially, in an effort to offset their smaller size or as a result of a budget which restricted investment in expensive aircraft, Iraq dedicated more of its manpower to the ground forces (four-fifths versus Iran's three-fourths), resulting in it boasting a larger supply of tanks and armored equipment (1,750 tanks versus Iran's 1,700 and 2,350 armored vehicles versus Iran's 1,900) at the start of the war.[4] Geographically speaking, Iran was also in a better position with its principal cities being protected by the Zagros

Mountains and the capital city of Tehran sitting 460 miles from the front lines. Conversely, Iraq did not have any substantial natural defenses and its largest, most populated cities were close to the front with "Bagdad 100 miles from the border by road and only six minutes by air".[5] Normal circumstances, however, did not exist in September 1980 when Iraq invaded Iran.

As will be discussed in the following section, Iran had just experienced a revolution and there was a new regime in control of the country which had large religious aspirations for the region. Saddam Hussein, feeling threatened by the new regime and seeing an opportunity to seize desirable terrain just within the Iranian border, took advantage of the confusion and disorder within the country, wagering that it would be enough to tilt the odds in his favor. In the end, he did not account for how loyal the Iranian population would remain to the Ayatollah and how far they would go regarding controversial tactics employed in the field. He also ignored the impact that his severe purging of military leaders would have on the capabilities of his forces in the field, while simultaneously expecting the purges conducted within the Iranian Army would provide an advantage for his forces.

In the conduct of research for this essay, primarily secondary sources with one primary source, which was a compilation of interviews with some of Saddam Husain's generals, were utilized. Although the Battle of Dezful was one of the largest armor battles and part of the first offensive campaigns conducted by Iran, the English-language literature on the war largely does not focus on the battle. This is because the battle did not have a significant impact on the war; specifically, it neither changed the outcome nor result in territory being gained. Regardless of its overall impact on the war, there are still important lessons that can be learned from the battle, which this paper will attempt to draw out. The preponderance of information utilized for this

paper will be pulled from the literature that focuses generally on the Iran-Iraq War and briefly discusses the battle, the operation, and/or the status of the forces at the time.

Orientation

Both, Saddam Husain and the Ayatollah Khomeini came to power in 1979 and the opposing political and ideological views of the two suggested the inevitability of war between their countries.[6] The Ayatollah and his followers encouraged their revolution to spread beyond Iran's boarders to all Arab countries. He specifically targeted Iraq on 15 March 1980, when he proclaimed, "O Iraqi people, beware your leaders and make revolution until victory."[7] Less than a week later, his son declared, "We must deploy all necessary efforts to export the revolution to other countries and reject the idea of containing it within our borders."[8]

Saddam wished to unite the Arab nation under himself and he believed a war would be a step toward that end.[9] He viewed himself as the man who would lead all Arabs, "to unite against Western imperialism and Zionism."[10] However, the Ayatollah Khomeini was making this difficult for Saddam and was threating his legitimacy as a leader. Encouraging the politically disenfranchised Iraqi Shi'a majority to rise against the Saddam's Ba'athist regime, Khomeini worked with Ayatollah Muhammad Baqir al-Sadr. Al-Sadr lived in Iraq and was able to ignite a series of riots and protest in early 1980, making it increasingly difficult for Saddam to maintain security within his borders. Following a failed assassination attempt by members of the Shi'i opposition of assistant Deputy Prime Minister Tariq 'Aziz during a speech, Saddam ordered the execution of al-Sadr and his activist sister.[11] Saddam took the additional precaution of exiling tens of thousands of Iraqis he believed to be disloyal and a threat to his regime.

Following the executions, the Iranian Ministry of Foreign Affairs, "confirming martyrdom of al-Sadr, declared: "we will not rest until the final overthrow of the criminal,

imperialist and Zionist-agent regime of the treacherous Saddam Hussein…it is up to the Muslim nation of Iran to assist and render succor the Muslim Iraqi nation with all its might."[12] This convinced Saddam that he needed to conduct a preemptive attack on Iran. He believed that with a limited invasion, he would be able to force Iran to withdraw from interfering with the internal affairs of his country, as had been required by the agreement of the 1975 Algiers Agreement. While Chad Nelson, in *Revolution and War: Saddam's Decision to Invade Iran* does not conform to this idea, he does present in his book the argument that Saddam also saw the opportunity to seize the important Khuzestan Province on the Iranian side of the Shatt al-Arab, which would allow him territory on either side of the river, as well as access to the large amounts of oil from that territory.[13] To that end, in 1980 he announced that the Algiers agreement was "null and void" and demanded recognition of Iraq's sovereignty over the Shatt al-Arab.[14]

Khomeini did not subscribe to the idea that Saddam was invading because of the instability he was creating in Iraq. Instead, he preached to the Iranians that they, "are fighting to protect Islam and he [Saddam] is fighting to destroy it."[15] In his mind, Iran was invaded because they "embodied Islam" and he utilized this as propaganda, stating that the "Islamic Republic presented the war as a gift to its Muslim constituents and an opportunity to confirm their faith through deed."[16] The new Iranian government understood that in order to be successful in this war, they would have to ensure it stayed focused on a religious perspective; a "crusade" which would allow them to consolidate power from the Bazargan government to just the clerics, led by Khomeini.[17]

On 22 September 1980, Iraqi forces escalated hostilities from small border disputes and overflight of territorial borders, to invading Iran. Saddam's forces had initial success with the fall of Khorramshahr and the important industrial cities of Abadan and Ahvaz being occupied

and isolated. This initial success slowed quickly, as Iraq was met by an enemy that proved more difficult to defeat than anticipated. This was not as a result of tactical genius on the part of the Iranians, but because of the Ayatollah Khomeini's ability to inspire his countrymen to die for their "key to heaven" coupled with the ineptness of the Iraqi Army.[18]

The Iraqi Army

In their book, *The Iran-Iraq War*, Murray and Woods said, "Iraq's military, in the 1980s, was as effective as Saddam wanted it to be, but not as effective as he needed it to be."[19] Saddam believed that a strong military would be the only entity capable of over-throwing his regime and took steps to ensure they did not have the capacity to do so. Once he ascended to the seat of president, he began purging the military of the experienced and competent leaders which he believed posed a threat to him. He then began promoting unqualified officers to fill the high-level commands, based on loyalty to the Ba'ath regime, for loyalty was far more important to Saddam than qualifications and he believed that all Ba'athist were, "truly natural leaders".[20] As a result, much of the lessons that Iraq had learned from the Yom Kippur war with regard to logistics and operational planning had been lost. The Iraqi army was able to retain some tactical efficiency, however, because most of the junior officer corps remained safe from the rampant purges.

Iraq's generals, most of which did not possess the experience or competence to command large forces such as the divisions and brigades they had been assigned, were unwilling and unable to provide qualified military advice to Saddam.[21] Further, they were afraid of the consequences of providing an opposing point of view to the dictator.[22] This led to a very centralized decision-making process in which Saddam alone made large operational and strategic decisions throughout the war. This had the effect of slowing momentum and limited the Iraqi

Army's ability to exploit success or necessarily change tactics to increase the odds of success.[23] Possibly most detrimental, Saddam and his unqualified generals "failed to develop a coherent strategy and corresponding set of tactics to take into account a determined Iranian adversary."[24]

Iraq invested heavily in modern technology, buying most of their equipment from the Soviet Union and to a lesser extent, from France. On the eve of the invasion, they had 1,600 tanks and APCs (armored personnel carriers), to include T-62s, T-72s, and BMPs. They also procured more than 200 modern Soviet aircraft, including MiG-23s and Su-22s.[25] Unfortunately, due to lack of training and maintenance, much of these capabilities were not able to be exploited until late in the war. The Iraqi military included nearly one-million artillery pieces, to include 150 pieces of self-propelled artillery, and an air force with more than 340 combat fix winged aircraft and 230 helicopters. Despite these large numbers, they lacked the necessary training to be proficient at employing combined arms.[26]

The Iranian Armies

The Iranians, coming out of a revolution, had largely stripped their qualified and trained professionals out of the army. The new government did not support modern militaries and therefore, did not believe in training and modernization.[27] As such, they had an ill equipped, ill prepared army of religious fanatics and highly untrained men and boys. Prior to Ayatollah Khomeini's leadership in 1979, "Iran appeared to be superior to Iraq in every quantitate index of civil and military power."[28] For many of the same reasons as Saddam, mainly lack of trust, the Ayatollah also purged most of the qualified and experienced leadership within the military, while others defected in order to escape punishment or death.[29] By September, 1980, the officer corps' effectiveness had been crippled as a result of more than 12,000 officers having been purged from the army and the desertion rate reaching nearly 60 percent.[30]

Despite the new regime's view on modernization, when war broke out, Iran still retained 447 aircraft within the air force, more than 760 new British Chieftain tanks and the older American M-47 and M60s, as well as 600 of the most technologically advanced American and British helicopters.[31] What they did not retain was the ability to employ these capabilities. As a result of the Shah's self-imposed requirement to control every aspect of the military, Iran, like Iraq, had a military that proved incapable of conducting critical problem solving, thinking independently at all levels, and lacked the ability to coordinate amongst the services. This was only amplified once the Ayatollah took control, so that on the eve of war, the army was at less than 50 percent of the effectiveness they had held only a year before. [32]

One of the largest issues confronting the Iranian Army during the war was the Pasdaran, or Revolutionary Guards. This was a militia Ayatollah Khomeini established in order to counter the potential effects of the actual army, which he viewed as a reminder of the Shah's regime, and therefore did not trust, expecting a counterrevolution from them.[33] Throughout the war, the Iranian Army would consistently have to compete with the Pasdaran for resources, money, and recruitment. This competition was one of, if not the, greatest contributors to the failed attack in the Battle of Dezful.

Both countries relied on external sources for matters of logistics, to include ammunition, equipment, and spare parts; all of which are required to fight a "modern" war.[34] Despite the need to rely on other nations for support, Iraq had an advantage over Iran. Iran, because of the Iranian Hostage Crises involving US citizens in 1979-1981, had lost all support from the United States. Thus, subject to U.S. sanctions, Iran was prevented from getting replacement parts for their American and British made equipment. However, they still had more than 1,000 tanks, which they were ablet to cannibalize for spare parts, early in the war.[35] Similarly, because of

their intent to push their brand of Islam on the rest of the region, they found themselves isolated. Iraq, as a result, benefited from the self-isolation Iran had created.

Leading up to the Battle of Dezful

On 22 September 1980, the Iraqi Air Force launched a surprise attack on ten Iranian airfields with the intentions of destroying their air force, preventing them for influencing the ground campaign.[36] The attacks, while they did destroy limited amounts of airfield infrastructure and small numbers of aircraft, did not have the desired effect.[37] The following day, the Iranian Air Force retaliated with Operation *Kaman 99*, targeting oil facilities, dams, petrochemical plants, air bases, and oil refineries. Unfortunately for Iran, they lost a number of aircraft and aircrews which they could not afford to lose during the attack. Despite the early losses, this attack successfully initiated an air harassment campaign that would eventually strangle Iraqi logistics and disrupt the Iraqi citizens.

On 23 September, Iraq began its ground campaign, conducting three simultaneous attacks along a 400-mile front with six divisions, intended to annex the border town of Khuzestan.[38] Four divisions attacked Khuzestan directly; the intention here was twofold: 1) cause a significant blow to the "prestige" of the Iranian government, leading to its downfall; and 2) encourage an uprising by the Arab ethnic majority within the town. Neither really materialized.[39] The other two divisions (one mechanized and one armored) attacked the port cities of Abadan and Khorramshahr.

Khorramshahr has come to be referred to as "The Bloody City" because of the intensity and type of fighting which took place in that town starting on 23 September. Both sides lost approximately 7,000 men in the nearly two months of fighting.[40] The Iraqi mechanized brigade

attacking the town was slowed by the Iranian Air Force and the Pasdaran, but ultimately, Iran was forced to completely withdraw from the city by 10 November 1980.

On 7 December 1980, Saddam announced that Iraq was going to transition to a defensive posture, as a result of heavier than anticipated resistance from the Iranians and the logistical difficulties they were experiencing.[41] With the exception of the Battle of Dezful, the next eight months both sides were in a defensive posture. Regular artillery attacks and various raids were conducted, but neither side attempted to adjust the statuesque.[42]

Battle of Dezful (5-8 January 1981)

In November 1980, the rain started to fall, signaling the beginning of the wet season and prompting the Iraqis to believe that the fighting had stopped until the spring of 1981.[43] For Iranian President, Abalhassan Bani-Sadr, there was an opportunity to improve his deteriorating political stance within government and in the eyes of the clergy in Tehran. Bani-Sadr had been under pressure from the "fanatics" supporting Ayatollah Khomeini, who believed he did not act as quickly to attack the Iraqis as they believed he should have.[44] They believed that Bani-Sadr intended to, "build not an Islamic army, but one that was directly under his influence so that he could work [against] the Imam's vision," upon his becoming president.[45] It was because of this pressure, that despite military advice to wait until the spring in order to reorganize forces, repair and replace equipment, and bolster the troops, the Iranian government pushed for an earlier attack, deeming it necessary to get an early victory in the war.[46]

President Bani-Sadr convinced Ayatollah Khomeini to allow him to directly lead the regular army on this attack, despite having no military background.[47] Operation Hoveyzeh (also referenced as Operation Nasir, which means victory), included the Battle of Dezful (and also referred to as the Battle of Susangard), the city from which the attack was launched, was hastily

planned and units were redesignated in order to ensure sufficient forces were available. The Iranian 88th Brigade was redesignated as the 88th Armored Division, which absorbed the remanent battalions of the 92nd Division, allowing them to allocate 280 Chieftain tanks to the operation.[48] Lacking reconnaissance troops, mechanized battalions, or artillery support, the 92nd was assigned point in the attack, with the 55th Parachute Brigade providing infantry support, and the 16th Armored Division serving as the reserve.[49]

As a result of the wet season, the terrain surrounding the roads was flooded, severely restricting movement off the roads. Additionally, areas along the road had been turned into swamps two months earlier by the Iranians when they flooded the land between the Karun and Karkheh Rivers.[50] This forced the three brigades within 88th Armored Division to attack in a single column, along the road, followed by the 55th Parachute Brigade, instead of protecting their flanks; this column stretched nearly ten miles.

The attack, which depended on surprise to be successful, lost the element of surprise immediately, as Iraqi signals intelligence intercepted Iranian radio communications, as a result of their transmitting in the clear (unencrypted).[51] Additionally, the Iraqis were tipped off by the Iranian helicopters flying overhead.[52] Forewarned of the approaching attack, on the morning of 6 January the Iraqi 9th Armored Division feigned retreat, firing sporadically to delay the advancing Iranian tanks. Once approximately half a mile back, they established new positions with one brigade on either side of the road the Iranians were approaching on, and another to the front, enabling them to provide fires from the front and on either of the Iranian flanks.[53]

Lacking artillery support and with completely uncoordinated and lackluster support from their Cobra attack helicopters, the Iranian tanks were decimated very quickly. Within a few hours, the 88th Division had lost the equivalent of an entire tank brigade.[54] The Iraqi artillery

was more effective, targeting the Iranian tanks in order to force their movement into designated engagement areas. On 7 January, instead of withdrawing to consolidate forces and reorganize the attack, the 88th's Division Commander sent his second tank brigade into battle, which saw no more success.[55]

On the 8th, the third brigade was committed to the fight, but learning from the previous two days of battle, they were withdrawn early in the afternoon in order to save some of the force. Over three days of fighting, the Iranians lost 214 of their Chieftain tanks, eight of their Cobras, and around 150 armored personnel carriers were captured. In the chaotic fighting, tanks were forced off the roads, where they were quickly bogged down, becoming easy targets or forcing crews to dismount. Dismounted crews were then easy targets for the tank crews, mechanized assets, and supporting infantry as they slogged through the knee-deep mud.[56]

The Iraqis lost fewer tanks for a number of reasons, which includes the fact that because they lacked the technical skill to fire and move, they had the majority of their tanks dug into fighting positions, decreasing their profile and ability to be targeted. These static positions also had the added benefit of allowing their gunners to take more accurate shots at the Iranian targets. Moreover, they were able to incorporate artillery into their actions, as well as air, although it was only marginally more effective than the Iranian air. Additionally, they were able to recover a copy of the Iranian 92nd Division's operation order early in the fighting on the 6th of January.[57] Consequently, the Iraqis lost about 100 tanks, most of which they were able to repair and bring back into the fight.[58]

Aftermath

The battle of Dezful was just a small part of a larger operation. As a whole, the operation failed and the Iranians failed to regain lost territory. Iraq's defense had clearly beaten the weak,

disorganized, and unsupported Iranian offensive. Despite losses of their own, this bolstered Iraq's confidence in victory. Following the battles, Saddam said to his staff, "[the Iranian] defeat [will make] them realize that they will not be able to defeat the Iraqi Army."[59] However, despite orders to continue to press the fight, maintain momentum, and remain in contact with the Iranians, Iraqi forces culminated, failing to seize the opportunity they had created. Saddam came to the realization that this was not going to be a war of short duration. He understood, that while the world acknowledged Iraq's success, Khomeini would not stop "…until blood is at his feet…"[60]

In the battle, Iran suffered significant loss of armored and mechanized assets, which they were not able to replace because of their lack of external support. Additionally, support for Bani-Sadr fell even further, while that for the radical religious leaders grew, along with their attacks on the regular army.[61] Whereas before the operation, the clerics in Tehran had little confidence in the regular army for a number of reasons after the operation, they lost all confidence in the regular army and ignored that their support of the Pasdaran contributed significantly to the ineffectiveness of the Army. Thus, following Bani-Sadr's failure in the battle, the clerics shifted all support to the Pasdaran as the primary instrument of war for the Khomeini government, leaving only minimal resources, manning, and equipment for the regular army.[62]

Another noteworthy change which took place following the failed operation in early January 1981 was the recalling of the Basij (their formal name was the Mobilization of the Oppressed). The Basij were a paramilitary force comprised of mostly lower-class citizens, which had first appeared when Iran seized the U.S. Embassy in Tehran, taking American citizens hostage. Expecting the United States to invade in response, Khomeini had originally called for

"20 million" volunteers.[63] When the invasion never materialized, he sent them home. As a consequence of the army's failures on the battlefield to that point and dwindling numbers of recruits, the Basij was recalled.

This call-up had two critical impacts on the rest of the war. First, it reduced the imbalance in manpower between the two countries from 5 to 1 (in favor of Iraq) to 2 to 1 (still in favor of Iraq). Second, it allowed the Iranian leadership to become creative with tactics.[64] Because this was a paramilitary unit, there was no expectation of them to be proficient. Thus, they were given two weeks of training, then sent to the front and placed under the Pasdaran. With the Basij came the introduction of the human wave attack, in which the Iranians would send masses of people, to include children as young as 12, into combat to clear minefields and obstacles, allowing the Pasdaran to attack.[65]

The Next Seven Years

In early spring of 1981, the Iranian military high command was ready to erase the memory of earlier failures and regain the advantage. At this time, the ground forces were still unable to mount any serious offensive; however, the Air Force was eager to show their value and loyalty to the regime. To do so, the proposed an air raid into Iraq which would demonstrate to the Iraqis that they were able to strike anywhere they wanted.

Air Force planners had identified the Iraqi H-3 airfield, which was located 30 miles from the Jordanian border. The base, which was previously believed to be insignificant as only a support field, had recently been reactivated to support their Tupolev bombers, store aircraft requiring heavy maintenance, and serve as a relay point for the Mirage -1s shipped from France.[66] With aerial photographs provided by Israel, the Iranians realized that H-3 was an optimal target with more than fifty aircraft of all types, in the open, scattered across the base with

no protection beyond a few outdated surface-to-air missiles and a small number of anti-aircraft guns.[67]

Having secured permission to fly through Syria and Turkey, just before dawn on 4 April 1981, the Iranian Phantoms took off from Hamadan. Each plane carried a mix of bombs, one Sparrow air-to-air missile, an Israeli countermeasure pod, and three external fuel tanks.[68] At 0815, they came into view of H-3, taking the base's defenses completely by surprise. They cratered the runway, preventing the alert aircraft from taking off, silenced what few anti-aircraft guns were active, and commenced their bombing runs. Each Phantom took four passes at the base creating chaos and destroying eight MiG-23s, five Su-20s, four MiG-21s, two Mirage F-1s, one Tu-16 bomber, three transport An-12s, and four Mi-8 helicopters and severely damaged approximately fifteen other planes.[69] In a single mission, which lasted less than five hours, they were able to put more than forty Iraqi aircraft out of commission, including half of their bomber fleet, without suffering a single loss of life or aircraft.

On 3 June 1981, the Israeli government ordered the destruction of Iraq's Osirak nuclear power plant. French technicians working at the plant had confirmed that the nuclear fuel had not been placed into the reactor and therefor there was no threat of nuclear fallout as a result of the attack.[70] They felt the attack was necessary in order to prevent Iraq from obtaining nuclear capabilities and with the plant scheduled to come online in November, there was no time to waste.

At 1600 on 7 June 1981, eight F-16 fighters and six F-15s took off from Etzion Air Base. At 1730, the first pilot released his two 2,000-pound bombs on the plant's containment dome. In less than two minutes, one-by-one, the seven other F-16s repeated the process with fourteen 2,000-pound bombs directly impacting the target and destroying the main reactor, the

containment dome, and the underground research lab.[71] In addition to the loss of billions of dollars invested in the plant, the destruction of Osirak also denied Saddam the nuclear power status which would have allowed him to dissuade Iran from continuing the war. He now had no way to force Iran to end the war and had not disillusions of the war ending in the near term. Unfortunately for Iran, it also had the unintended result of Iraq gaining the support of the United States and the Soviet Union. With the threat of nuclear proliferation off the table, they were willing to help Iraq with this supply problems.[72]

Throughout the rest of 1981 and into 1982, the Iranians, employing the Basij in conjunction with their new tactics, experienced new levels of success. By the spring of 1982, they had turned the war around, even recapturing the "Bloody City" of Khorramshahr. With heavy losses to this point on both sides, Saddam ordered a withdrawal back to the border.[73] Iran, although it had suffered heavier losses, had repelled an invasion. On 10 June 1982, Saddam unilaterally proclaimed a cease fire and accepted the principal conditions proclaimed by Tehran: "withdrawal from the conquered territories and payment of reparations via voluntary contributes made by the Arab states supporting Baghdad." Additionally, he recognized the borders outlined in the Algiers Accord of 1975 and accepted responsibility for starting the war.[74]

Ultimately, Saddam refused to stepdown as the leader of Iraq and Iran decided to press the offensive, invading Iraq. For most of the next five years, Iraq remained on the defensive, unable to mount any major offensives. While Iran conducted more than seventy offensive operations, Iraq employed a defense in depth, desperately holding on. In early 1987, Iran launched a series of attacks which resulted in significant loss and ended in a stalemate and the use of chemical weapons.[75] 1987 was characterized by a stalemate on land and the presence of an air and tanker war. The tanker war saw the direct involvement of the United States, to include

the USS Starke being hit by an Iraqi missile, the USS Vincennes shooting down an Iranian Air Airbus in the Gulf, and operations by Navy SEALs on Iranian vessels.[76]

On 15 July 1988, the Iran government decided to end the war. Two days later, Saddam listed his conditions for accepting a cease fire. It was not until 6 August, following attacks by the Iraqi Army to induce pressure on Tehran, did Iran unconditionally accept the ceasefire and Saddam's terms. On 20 August, the ceasefire became effective, monitored by UN Forces[77]

How the Battle Might Have Been Influenced

There are a number of things that could have influenced how the Battle of Dezful unfolded and thus, potentially changing the course of the war altogether. Probably the most impactful would have been to delay the attack until the dry season, as had been suggested by the Iranian Army's Chief of Staff.[78] There was no strategic necessity to conduct the operation as early as they had, because the Iraqi Army had settled into a defensive posture and was not planning any immediate operations. It was understood that this was the wet season and therefore would severely prohibit, or restrict any significant actions at that time. Had the Iranians listened to the military advice they were provide and taken advantage of the operational pause on the part of the Iraqis, they would have been able to conduct better intelligence gathering on the disposition of the Iraqi forces. Delaying the operation would have also allowed the Iranians to repair and replace damaged equipment, properly reorganize and train forces, and improve coordination between the regular army and the Revolutionary Guard. Finally, and arguably most impactful, it would have allowed time for the fields and surrounding terrain to dry, thus enabling the armored units to organize into appropriate formations and effectively engage the enemies.

Appropriately task organizing the division would have gone a long way to influence the outcome of the battle. As previously discussed, the newly formed 88th Armored Division

(formerly the 88th Brigade) did not have their compliment of reconnaissance assets (a regiment by standard task organization), which would have been able to inform the main-body of the three Iraqi armored brigades, mechanized brigade, infantry, anti-tank assets, and artillery that lay in wait ahead of them.[79] They also lacked the majority, if not all, of their artillery assets, which could have contributed greatly to their advance by reducing dismounted anti-tank personnel, reducing enemy tank positions, and obscuring the Iranian's advance (It could be argued this is improbably as neither army clearly demonstrated an ability to conduct a combined arms attack throughout the war; however, it does not change the hypothetical that had the 88th Armored Division been properly manned and equipped, it could have changed the outcome of the war. Even in-accurate artillery will produce a psychological effect and can effectively cause the enemy to remain in defilade, if not effectively obscure movement.).[80]

These first two recommendations are both tied to problems which resulted from the same thing; political pressure which was being placed upon Bani-Sadr.[81] The clergy in Tehran felt they needed a quick victory against the Iraqis, "even [if] merely symbolic," in order to calm the growing discontent within the country. Because of this, they did not want to wait until the Spring. It is also because of this that Bani-Sadr did not want to allow the Revolutionary Guard to participate in the attack, although they did support nominally.[82] Had they been allowed to support in large numbers, they would have potentially accounted for the missing capabilities that the 88th Armored Division was required to attack without.

Lastly, had the Iranians exercised better security practices, they would have potentially maintained the element of surprise long enough to catch the Iraqi forces unprepared for an attack of this proportion. As previously discussed, the Iranians did not encrypt their radio communications, which tipped the Iraqis to their approach, a day before the actual assault

happened.[83] Both belligerents in this war had one of the most sophisticated and technologically advanced armies (in regard to equipment, not personnel) of the time.[84] While it is almost certain Iran had the ability to encrypt their communications, their negligence can likely be attributed to poor discipline resulting from undertrained soldiers, non-commissioned officers, and officers as well as maintenance issues with their radios due to their aforementioned inability to get parts.

While the play of the wargame being developed in conjunction with this essay cannot be expected to accurately predict what could have been in the Battle of Dezful, had the Iranians done any of the potential changes discussed above, it will allow the player the opportunity to test the thesis. To that end, the game will incorporate mechanized and armored battalions of various make-up, task organization, and strength in order to depict the potential influences on battle. The game will also include "chance" cards which will account for the impact of leadership, reconnaissance, logistics, and operational security. These cards, which will be drawn at predetermined points throughout the game, and will either provide advantages or disadvantages to the players, forcing them to account for them, or suffer the potentially detrimental consequences. Further, the game will provide players with the ability to incorporate combined arms with limited amounts of aviation support and artillery into their moves. If done well, it can severely reduce the enemy's ability on the board, as in real world battles.

Lastly, the game is designed so that while each player will only have six battalion to play with, they will draw those battalions at random. This ensures that the game will not be the same every time it is played and will allow players to see the effects of different strengths and task organization. These various task organization will require the player to give varying levels of consideration for logistical requirements and employment methods. All the while, chance will

be incorporated through the "chance" cards as well as the rolling of dice to determine impacts of engagements, as no two events are ever truly the same.

Conclusion

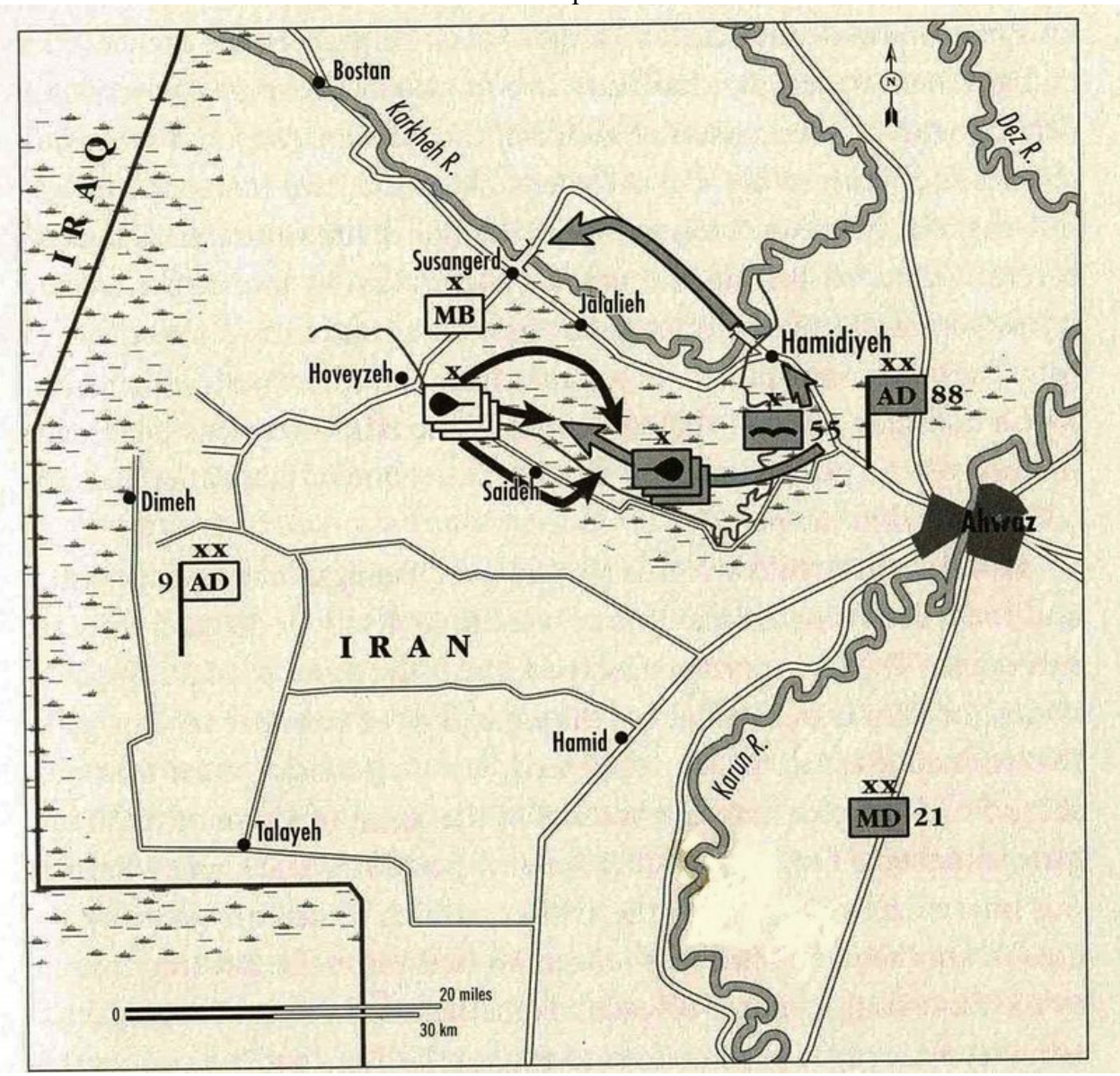
There is very little information which speaks directly to the battle and when it is addressed, it is usually a small section of a larger work. While it was the largest tank battle in the war, it was not a significant battle. It did not result in changes to territory held by either side and it certainly did not expedite the end of the war. What it did do, was solidify the doubt which had existed with regard to the Iranian regular army and its leaders and their ability to win the war. Secondly, it sparked a change in tactics, shifting to the "human waves" that the Iranians would begin using to break Iraqi lines.[85] This shift in tactics and the willingness of the Iranians to support the weaponizing of humans demonstrated to Iraq, and the rest of the world, the hold the religious leaders in Tehran had of their fanatic citizens.

However, the point of this essay was not to provide new insight to the Iran-Iraq War, as there are numerous publications and essay already written on the topic. Nor was the point to describe in great detail what happened in the Battle of Dezful. This essay was intended to provide a brief overview on the war as a whole and establish context for the battle the game was inspired by. Having read this essay, those playing "Battle of Dezful" should be able understand how the Battle of Dezful came to be and where it fit in the greater context of the Iran-Iraq War. Further, they should have gleamed an understanding of what both sides did wrong, what they did right, and what they could have done differently in order to, in theory, significantly change the course of the war.

Should further research on the topic be conducted in order to better develop the game, it would be relevant to look at the morale of each army as well as more detailed research conducted

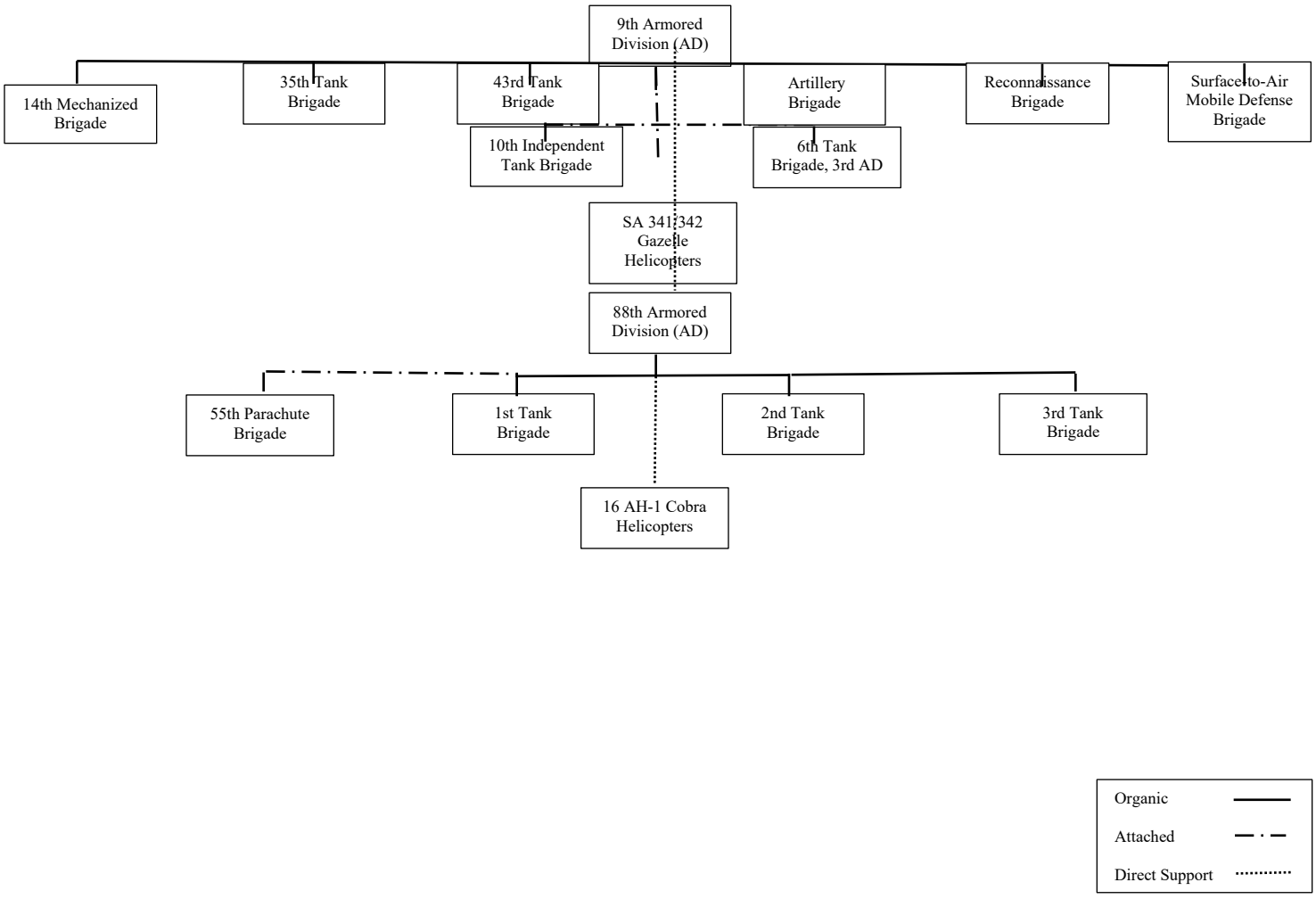
on the leadership involved. What were their motivations, qualifications for the billets they held, and previous engagements they were in up to that point. Additionally, an entire essay could be written on the struggle between the Iranian Army and the Pasdaran (the revolutionary army) and the significance of that struggle on the overall impact of Iran throughout the war.

Appendix A
Map



Appendix B
Task Organization for Battle of Dezful

Iraq



Appendix C
(Information pulled from Pierre Razoux's *The Iran-Iraq War*)

Iraq

- Each armored division (270 tanks) was supported by a surface-to-air mobile defense brigade, by an artillery brigade (fielding about 40 self-propelled guns and about 30 multiple rocket launchers), and a reconnaissance regiment.

- Each mechanized division (180 tanks) was supported by an artillery brigade fielding about 60 artillery pieces.

- Each mechanized brigade fielded about 100 armored personnel carriers and about 30 T-55 tanks

- Each armored brigade fielded about 100 tanks and about 40 armored vehicles for infantry combat.

Iran

- Each armored division (360 tank) was supported by an artillery brigade fielding about 100 self-propelled guns and a reconnaissance regiment equipped with Scorpion light tanks.

- Each armored brigade fielded 120 tanks and about 40 armored personnel carriers.

- Each mechanized brigade fielded close to 150 armored personnel carriers.

Appendix D
Equipment – Capabilities and Limitations

BMP-1

Mass	13.2 Tons
Length	6.735m
Width	2.94m
Height	2.068m
Crew	3 (Commander, driver, gunner) +8 Passengers
Armor	6-33mm welded rolled steel
Main Armament	- 73mm 2A28 Grom low pressure smoothbore short-recoil semi-automatic gun (40 Rounds) - ATGM launcher for 9M14 Malyutka (4 Rounds) or other turrets with 2A42 or 2A72 autocannons
Max Range	800 – 1,300 meters
Secondary Armament	7.62mm PKT coaxial machinegun (2,000 Rounds)
Fuel Capacity	122 US gallons
Operational Range	600km (370 mi) road 500km (310 mi) off-road
Maximum Speed	65km/h (40 mph) road 45km/h (28mph) off-road 7-8 km/h (4.3-5 mph) water

OT-64A SKOT-2A

Mass	14.5 Tons
Length	7.44m
Width	2.55m
Height	2.71m
Crew	2 (Commander, driver) +10 Passengers
Armor	6-13mm
Main Armament	7.62mm PKT machine gun and 14.5mm KPV machine gun
Max Range	1,000m
Secondary Armament	N/A
Fuel Capacity	122 US gallons
Operational Range	710km (441 mi) road
Maximum Speed	94km/h (58 mph) road 9 km/h (6 mph) water

OT-62 TOPAS

Mass	13 Tons
Length	7.1m
Width	3.14m
Height	2.1m
Crew	2 (Commander, driver) +16 Passengers
Armor	Welded, rolled steel; 17mm thick
Main Armament	82mm T-21 Tarasnice recoilless gun
Max Range	500m
Secondary Armament	7.62mm Vz. 59T general purpose machine gun
Fuel Capacity	107.5 US gallons
Operational Range	550km (342 mi) road 450km (280 mi) off-road
Maximum Speed	60km/h (49.7 mph) road 10.8 km/h (6.2 mph) water

BTR-60

Mass	11.4 Tons
Length	7.56m
Width	2.83m
Height	2.31m
Crew	3 (Commander, driver, gunner) +14 Passengers
Armor	Welded steel; 5-10mm thick
Main Armament	14.5mm KPVT heavy machine gun
Secondary Armament	7.62 mm PKT tank coaxial machine gun
Max Range	1,000
Fuel Capacity	76.6 US gallons
Operational Range	500km (310.7 mi) road
Maximum Speed	80km/h (49.7 mph) road 10.8 km/h (6.2 mph) water

BTR-152	
Mass	9.91 Tons
Length	6.55m
Width	2.32m
Height	2.36m
Crew	2 (Commander, driver) +18 Passengers
Armor	Welded steel; 4-15mm thick
Main Armament	7.62 mm SGMB light machine gun
Max Range	1,000m
Secondary Armament	2 x 7.62 mm SGMB light machine gun on side pintel mounts
Fuel Capacity	79 US gallons
Operational Range	650km (404 mi) road
Maximum Speed	75km/h (46.6 mph) road

T-55

Mass	36 Tons
Length	9m
Width	3.37m
Height	2.4m
Crew	4 (Commander, driver, gunner, loader)
Armor	Welded steel; 20mm – 205mm thick 20mm (hull bottom and lower sides) 30mm (turret roof) 33mm (hull roof) 60mm (turret rear) 120mm (hull front) 130mm (turret sides) 205mm (turret front)
Main Armament	D-10T 100mm rifled gun (43 rounds)
Max Range	2,500m
Secondary Armament	7.62mm SGMT coaxial machine gun
Fuel Capacity	153 US gallons (internal) 84.5 US gallons (external) 105.7 US gallons (jettisonable rear drums)
Operational Range	500km (311 mi) road 650km (466 mi) with drum tanks
Maximum Speed	51km/h (31.6 mph) road

T-62

Mass	37 Tons
Length	9.34m
Width	3.3m
Height	2.4m
Crew	4 (Commander, driver, gunner, loader)
Armor	Welded steel; 20mm – 214mm thick 20mm (hull bottom and lower sides) 40mm (turret roof) 31mm (hull roof) 97mm (turret rear) 102mm (hull front) 153mm (turret sides) 242mm (turret front)
Main Armament	115mm U-5TS smoothbore gun (40 rounds)
Max Range	1,500m – 3,000m
Secondary Armament	7.62mm PKT coaxial machine gun 12.7mm DShK AA heavy machine gun
Fuel Capacity	254 US gallons (internal) 106 US gallons (external)
Operational Range	450km (280 mi) road 650km (400 mi) with external tanks
Maximum Speed	50km/h (31 mph) road

T-72

Mass	45.7 Tons
Length	9.53m
Width	3.59m
Height	2.23m
Crew	3 (Commander, driver, gunner)
Armor	
Main Armament	125mm 2A46m/2A46M-5 smoothbore gun (45 rounds)
Max Range	850m – 3,000m
Secondary Armament	7.62mm PKT coaxial machine gun 12.7mm DShK AA heavy machine gun
Fuel Capacity	320 US gallons (internal) 157 US gallons (external)
Operational Range	460km (290 mi) road 700km (430 mi) with external tanks
Maximum Speed	60km/h (37 mph) road

Su-100 Tank Destroyer	
Mass	31.6 Tons
Length	9.45m
Width	3m
Height	2.25m
Crew	4 (Commander, driver, gunner, loader)
Armor	Welded steel; 20mm – 75mm thick 75mm (front) 45mm (sides) 45mm (rear) 20mm (roof)
Main Armament	100mm D-10S gun (50 rounds)
Max Range	1,500 - 2,000m
Secondary Armament	N/A
Fuel Capacity	100 US gallons
Operational Range	200 - 250km (124 - 199 mi) road
Maximum Speed	48km/h (30 mph) road

Su-152	
Mass	45.5 Tons
Length	8.95m
Width	3.25m
Height	2.45m
Crew	5 (Commander, driver, breach operator, loader, gunner)
Armor	75mm (front) 60mm (sides & rear) 20mm (roof)
Main Armament	152mm ML-20S Howitzer (20 rounds)
Max Range	13,000m
Secondary Armament	7.62mm 12.7mm DShK machine gun
Fuel Capacity	162 US gallons
Operational Range	200 – 240km (124 – 149 mi) road
Maximum Speed	43 km/h (27 mph) road

PT-76

Mass	14.6 Tons
Length	7.63m
Width	6.91m
Height	2.33m
Crew	3 (Commander/gunner, loader, driver)
Armor	RHAe; 7mm – 25mm thick 20mm (turret sides) 25mm (turret front) 8mm (turret top) 13mm (turret rear) 14mm (hull sides) 7mm (hull rear)
Main Armament	7.62mm D-56T rifled tank gun (40 rounds)
Max Range	1,500m
Secondary Armament	7.62mm SGMT coax machine gun
Fuel Capacity	66 US gallons
Operational Range	370 – 400km (230 – 249 mi) road
Maximum Speed	44 km/h (27 mph) road 10.2 km/h (6.3 mph) water

EE-9 Cascavels	
Mass	13 Tons
Length	6.29m
Width	5.25m
Height	2.6m
Crew	3 (Commander, driver, gunner)
Main Armament	90mm Engesa EC-90 (44 rounds)
Max Range	
Secondary Armament	2 x 7.62mm machine guns
Fuel Capacity	95 US gallons
Operational Range	750km (470 mi) road
Maximum Speed	100 km/h (62 mph) road

Panhard M3	
Mass	6.7 Tons
Length	4.45m
Width	2.4m
Height	2m
Crew	2 (Commander, driver) + 10 passengers
Main Armament	N/A
Secondary Armament	N/A
Fuel Capacity	43.6 US gallons
Operational Range	600km (373 mi) road
Maximum Speed	90 km/h (56 mph) road

AML-90

Mass	6.7 Tons
Length	4.45m
Width	2.4m
Height	2m
Crew	2 (Commander, driver) + 10 passengers
Main Armament	90mm rifled gun (20 rounds)
Max Range	2,000m
Secondary Armament	7.62mm MAS coaxial machine gun
Fuel Capacity	43.6 US gallons
Operational Range	600km (373 mi) road
Maximum Speed	90 km/h (56 mph) road

SA-342 Gazelle	
Speed	193 mph (max) 168 mph (cruise)
Fuel	117.5 US Gallons (Internal) 23.7 US Gallons (Internal Auxiliary Tank) 52.8 US Gallons (Additional Auxiliary Tank)
Range	670km (416 miles)
Armament	20mm cannon, AT-3 ATGMs, SA-7, 57mm rockets,
Crew	2
Capabilities	Night flights

Chieftain	
Mass	56 Tons
Length	10.77m
Width	3.66m
Height	2.9m
Crew	4 (Commander, driver, gunner, loader)
Armor	127mm (front) 50mm (sides and rear) 350mm (turret)
Main Armament	L11A5 120mm rifled gun (64 rounds)
Max Range	3,000 – 5,000m
Secondary Armament	7.62mm coaxial machine gun 7.62mm mounted machine gun
Fuel Capacity	234 US gallons
Operational Range	500km (310 mi) road
Maximum Speed	40km/h (25 mph) road 48km/h(30 mph) off road

M-60 A1

Mass	45.3 Tons
Length	9.3m
Width	3.63m
Height	3.27m
Crew	4 (Commander, driver, gunner, loader)
Armor	109mm (front) 250mm (turret)
Main Armament	M68E1 105mm (63 rounds)
Max Range	3,000m
Secondary Armament	7.62mm coaxial machine gun .50 Cal BMG mounted machine gun
Fuel Capacity	385 US gallons
Operational Range	500km (300 mi) road
Maximum Speed	48km/h (30 mph) road 19km/h (12 mph) off-road

M-113	
Mass	12.1 Tons
Length	4.9m
Width	2.7m
Height	2.5m
Crew	2 (Commander, driver) + 11 Passengers
Armor	28-44mm
Main Armament	M2 .50 Cal machine gun (63 rounds)
Max Range	2,000m
Secondary Armament	N/A
Fuel Capacity	385 US gallons
Operational Range	480km (300 mi) road
Maximum Speed	64km/h (40 mph) road 5.8km/h (3.6 mph) swimming

Cobra	
Speed	195 mph (max) 141 mph (cruise)
Fuel	117.5 US Gallons (Internal) 23.7 US Gallons (Internal Auxiliary Tank) 52.8 US Gallons (Additional Auxiliary Tank)
Range	610km (379 miles)
Armament	30mm cannon mounted on front, TOW Missile Launchers, 2x 2.75mm rocket pods
Crew	2
Capabilities	All weather and night flights, FLIR sights, thermal sights,

Notes

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[43] Ibid. 143

[44] Ibid. 144
[45] Ibid. 144
[46] Razoux. *The Iran-Iraq War*. 151-152
[47] Ibid. 151-155
[48] Ibid. 151-155
[49] Ibid. 151-155
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[51] Murray et al. *The Iran-Iraq War: A Military and Strategic History*.
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[65] Ibid. 10
[66] Razoux. *The Iran-Iraq War.* 162
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[73] Pelletiere. *Lessons Learned: The Iran-Iraq War.* 11
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[76] Ibid. 420-432
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