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NON-HOSTILE CASUALTIES IN “THESE KINDS OF WARS” FROM THE
KOREAN WAR TO OPERATION IRAQI FREEDOM

by

HUGH HENRY

(Under the Direction of Emerson Thomas McMullen)

ABSTRACT

This thesis provides a detailed study of the non-hostile deaths of the Korean War, the Vietnam War, Operation Desert Storm, and Operation Iraqi Freedom. This document examines the causes of the non-hostile deaths, from illnesses, accidents, friendly fire, and other injuries, as well as the trends in each war and the impact that these casualties exerted at the time they happened. In addition, this thesis explores the lessons the Armed Forces leaders applied between the wars in an effort to reduce non-hostile losses for the next war.

INDEX WORDS: Spring 2008, Master’s Thesis, College of Graduate Studies,
Hugh Henry, Master’s Degree, Georgia Southern University

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Fulfillment of the Requirements for the Degree

MASTER OF ARTS

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CHAPTER 1: INTRODUCTION

NON-HOSTILE CASUALTIES IN “THESE KINDS OF WARS” FROM THE KOREAN WAR TO OPERATION IRAQI FREEDOM

Monuments and shrines throughout the United States pay tribute to the men and women who fought in a foreign war. Some databases and rolls of honor list the names of the dead and pay tribute for the sacrifices they and their families made. Next to most of the names, a brief description accompanies, for example, “killed in action in a small-arms firefight.” Next to some names, however, the record is strangely blank. The note may tell that the serviceman is survived by his wife and the infant child he never met, but the compiler of the honor role left scarcely a clue as to the manner of the soldier’s death. These losses are usually deaths from non-hostile means: vehicle accidents, illnesses, and assorted other causes that merit very scarce mention at the time in press reports. Some lists of the dead from Operation Desert Storm report the causes of all of the hostile deaths from combat operations completely and provide almost no causes of death for non-hostile losses. Few historians have thus far explored the trends of how these soldiers died and what lessons the Armed Forces learned from their deaths.

For present purposes, “non-hostile causes” refers to accidents, diseases, aircraft crashes, and friendly fire. “Casualties” is a term restricted to deaths because the records of wounds are long, debatable, and rather too varied for a concise examination. Moreover, only deaths appear on the metaphorical radar screens of the Generals who develop strategic and tactical plans. Trends that lead to deaths prompt commanders to rectify the situations in a way that wounds do not.

Although the United States has not declared war officially since the Second World War, common usage relegates the American campaigns in Korea and Vietnam to the status of wars. The two campaigns in the Persian Gulf region are referenced by their operation names: Operation Desert Storm and Operation Iraqi Freedom. Common usage also conveys on Operation Desert Storm the titles “The Gulf War” and “The First Gulf War.” T. R. Fehrenbach’s book, *This Kind of War*, inspired the title of this study because the four major wars since World War II have shared common characteristics. Attrition wars all, the campaigns in Korea, Vietnam, and the Persian Gulf region have prompted politicians, Generals, journalists, and ordinary citizens to calculate the costs of each conflict against the apparent benefits that they attained. In each case, the opponents of the current war-related policy presented the possibility of American withdrawal in an instant or graduated manner. The optional nature of each war led critics to measure the costs in money, time duration of the conflict, and lost lives and equipment. Each of these four wars altered or threatened to affect the military, societal, and political landscape of American society in tangible ways. Each major war produced problems for the Armed Forces to solve and provided a proving ground for learning the last war’s lessons.

Shorter and more minor involvements, such as American funding of guerrilla fighters in El Salvador, Afghanistan and Nicaragua, as well as the lengthy peace-keeping deployments in Bosnia, affected political battles but did not produce American casualties in significant numbers. The very brief military campaigns in Grenada, Panama and Somalia likewise consumed so little time and so few resources that the Armed Forces did not create and pursue unique strategic objectives. The four limited wars in Korea, Vietnam, and the Persian Gulf region all required the Generals commanding the U.S.

Armed Forces to employ the strategic lessons of the past, to deploy large numbers of troops overseas, and to fight battles of uncertain outcomes with enemies that opposed them in numbers relatively comparable to theirs. These operations all featured trends in deaths over time, changing situations that impacted public opinion, and lessons that the Generals used when prosecuting the next war.

In all matters public and political, the civilians in charge of approving the major military campaigns from the Korean War to Operation Iraqi Freedom evaluated the conflicts based on duration in time, the number of servicemen and women who died, and what progress the Armed Forces had achieved in exchange for these investments. The heightened importance of casualties in these calculations has proceeded to elevate non-hostile losses to an unprecedented level of importance. The concepts of victory and defeat have changed over the course of the last fifty-seven years since the beginning of the Korean War, giving new prominence to non-hostile casualties. As politicians, news reporters and Generals calculate the costs of the wars, they weigh every death – including those from non-hostile means – equally. An excessive cost in troops can lead to changes in policy and a decline in public approval of the war effort.

In each major campaign, commanders of troops at every level made and have made a concerted effort to reduce the instances of friendly fire. The Chiefs of Staff of the U.S. Armed Forces recognized particular problems with the conduct of the Korean War and attempted to address them in the next major conflict. A large coalition of several countries, including British, Turkish, Republic of Korea (ROK) troops and others, produced a number of command, communication and control issues. Close air support, (CAS) a tactic still relatively new to warfare, produced the most widespread and

devastating source of friendly fire. Typically, American aircraft pilots who lacked adequate communication with the elements on the ground made judgments as to which ground forces belonged to the enemy and fired on them. A lack of communication abilities among Coalition nations also contributed to friendly fire when units from different countries mistook one another for enemy elements.

Soldiers like the pilots in Korea often experience disorientation and clouded judgment when their duties require immediate decisions with dire consequences. The limited information available to the soldiers couples with fear of imminent danger and uncertainty amidst battlefield conditions that are changing rapidly. This dangerous, uninformed environment that breeds disorientation and snap decisions is called the “fog of war.” Frequently, commanders of units of all sizes make decisions that hindsight proves incorrect, costly, or deadly, but the blunders are understandable in light of the minimal information available. The “fog of war” has played a role in many instances of fratricide across the various wars.

Between the Korean War and the Vietnam War, pilots received excellent training that reduced the risk of fratricide from CAS. As American and ARVN infantry called for CAS in Vietnam, very few episodes of air-to-ground fratricide resulted. In some instances, however, the Air Force learned that training in air-to-ground fighting had also taken time away from air-to-air combat training. The general methods of providing treatment to casualties also changed dramatically between the Korean War and the War in Vietnam. The helicopter and the Mobile Army Surgical Hospital (MASH) each made their first appearances as a medical evacuation and treatment tools in Korea. The Army had adopted the MASH concept to correct the problem in the Second World War of

hospitals located too far to the rear to provide rapid treatment to casualties. For one war, the Army made its hospitals mobile enough to follow the combat soldiers to areas near the front lines while air evacuation remained a rare luxury. By the time of the War in Vietnam, the Army had improved its casualty evacuation procedures so thoroughly that the MASH had become obsolete. Thereafter, helicopters could evacuate troops so efficiently that the hospitals did not need mobility.

From the War in Vietnam to Operation Desert Storm, the Air Force improved its air-to-air combat training and regressed somewhat in the realm of air-to-ground warfare. Since the Second World War, Air Force Generals have periodically learned, unlearned and relearned the lesson that air power alone cannot stop all or even a majority of enemy tactical and logistical operations. Although command, communication and control techniques improved before Desert Storm, the large percentage of fratricide incidents from air-to-ground fire highlighted a decline in CAS proficiency. Once again, some of the problems of fratricide derived from confusion over a Coalition with several different countries. Operation Desert Storm also revealed a defect in Armed Forces casualty reporting. The Armed Forces initially reported the victims of friendly fire as having died in battles with enemy forces. Thirty-five families suffered a severe shock in August 1991, when they discovered that their relatives had died in friendly fire episodes.

With one notable exception, the Armed Forces corrected its policy on friendly fire reporting and gave accurate initial reports to the soldiers' families and to the public during Operation Iraqi Freedom. The Generals of Operation Iraqi Freedom also learned the lessons from Desert Storm by improving CAS procedures and correcting their assessment of the strength of air power to a more realistic estimate. Infantry soldiers

fought the major engagements of Operation Iraqi Freedom and relied relatively little on air power after the initial invasion. As Operation Iraqi Freedom transitioned into a lengthy occupation characterized by scattered skirmishing with insurgents, the leaders of the U. S. Armed Forces prepared for a long campaign. Each base adjusted to a garrison-like environment and company-grade officers enforced policies mandating seatbelts and helmets so as to reduce the risks of traffic fatalities. At some points in the occupation, the decline in non-hostile deaths due to safety policies proved large enough that it reduced the Coalition death toll over the year as a whole.

CHAPTER 2: THE KOREAN WAR

NON-HOSTILE CASUALTIES IN “THESE KINDS OF WARS” FROM THE KOREAN WAR TO OPERATION IRAQI FREEDOM

As the month of June 1950 neared its conclusion, war engulfed the partitioned nation of Korea with a speed and ferocity that stunned and panicked the people so recently liberated from Japanese colonial rule. South Korean President Syngman Rhee begged for immediate military aid from the United States and from any other allies that would contribute, while at the same time reporting that his Republic of Korea (ROK) soldiers were fighting tenaciously and might prevail unaided. Perhaps hoping to match the determination of the North Korean invaders, President Harry S. Truman and the United Nations Security Council both issued immediate statements of condemnation against the aggressors and committed troops to defend South Korea and repel the forces of Kim Il Sung. The President considered the situation so urgent that he pledged the troops stationed in Japan under General Douglas MacArthur to fight in Korea before he had obtained any sort of Congressional authorization.

To the United States, the Korean War amounted to a defense of the free world against Communist aggression. The Russian equipment and weapons that the North Koreans used gave significant life to fears that the Communist nations of the world had combined their resources to advance a monolithic Communist imperialism in the Far East. Two days after the North Korean invasion had begun, on June 27, 1950, the *New York Times* published a compilation of editorials from several major cities throughout the United States. Of the 17 editorials, 14 mentioned the Soviet Union, Stalin or the Kremlin specifically as the driving force behind the North Korean invasion of South Korea and

only one described the situation as a civil war between the Koreans.¹ The later entrance of Chinese troops further supported this view of a determined and unified Communism that threatened the democratic countries of the world. President Truman's administration already smarted from the political scars of "losing" China to Communist control. The President could ill afford another such defeat.

Thus, for the first of two times in the second half of the twentieth century, American citizens learned that their soldiers were going to fight a war in a distant East Asian country that many of them could not have found on a map. The geographic distance of Korea, thousands of miles from the American homeland, prompted the public to question the necessity of waging a war in that area. As General Matthew Ridgway pointed out in his memoir, American policy had seldom considered Korea as a critical strategic location in previous decades. Aside from Theodore Roosevelt's negotiation of the peace treaty ending the Russo-Japanese War, the United States had watched passively as Korea and land adjacent to it had changed hands among the Russians, Chinese and Japanese.² The Cold War had created a new diplomatic and strategic environment for Korea, the United States, China, and the Soviet Union. In June 1950, Korea represented a situation in which the fledgling United Nations (UN) had drawn a national boundary at the 38th Parallel and Communist forces were attempting to expand their territory in violation of the UN's decision. In practice, the Korean War became the military, diplomatic, and political proving ground of the new Truman Doctrine, by which the United States vowed to defend any democratic country against invasion by Communists.

¹ Associated Press, "Comments by Press of Nation on Korean Situation," *New York Times*, 25 June 1950, A10 (L).

² Matthew B. Ridgway, *The Korean War: How We Met the Challenge, How All-out Asian War was Averted: Why MacArthur was Dismissed, Why Today's War Objectives must be Limited* (Garden City, NY: Doubleday, 1967), 4-6.

Although the Korean War began with a dramatic act of aggression, as had the entry of the United States into the Second World War, the invasion of South Korea by the North Koreans did not obviously threaten American citizens or assets. The Truman Doctrine made sense to politicians charged with securing the United States against foreign enemies, but average citizens proved less willing to endure a full-scale war in a place whose strategic significance seemed mysterious to them. Fundamentally, the public was not prepared emotionally for another war so promptly after the titanic struggle of the Second World War. As would be the case in the following three wars as well, the public counted the costs in blood and treasure of a war fought in a distant land and questioned whether the benefits outweighed the costs. The political and military authorities enjoyed only a limited duration of public approval for the war.

The course of the Korean War changed the goals and objectives that the military and civilian leaders of the United States pursued in important respects. After the Chinese forces entered the war in the late months of 1950, President Truman and General MacArthur, the overall commander of the UN forces in Korea, differed markedly over questions of policy. After China's entry, President Truman established the policy of restoring the border between North and South Korea, whereas MacArthur championed at least reunifying Korea under Syngman Rhee's control and at most launching an air and naval war against China. MacArthur discussed frequently and publicly his view of how the United States should conduct its foreign policy, in spite of the President's order to the contrary. President Truman accused him of insubordination and relieved him in the spring of 1951. Consecutive covers of *Time* magazine on April 23, and April 30, 1951, commemorated the clash, first naming Truman, "The Little Man Who Dared." Truman

defended his policy, emphasizing his agreement with MacArthur that the primary enemies the UN forces faced in the Korean War were Soviet Communists. He asked rhetorically, “What would suit the ambitions of the Kremlin better than for our military forces to be committed to a full-scale war in China?”³

On the following week, MacArthur’s resolute face appeared on the *Time* cover above his famous quote, “There is no substitute for victory.” Having lost the political battle and his command, MacArthur returned to the States and began the public relations fight that sustained his popularity at the expense of the President. In July 1951, in a speech to the Massachusetts General Court, MacArthur decried the concept that, “the members of the Armed Forces owe their primary allegiance and loyalty to those who temporarily exercise the authority of the executive branch of government, rather than to the country and its Constitution they are sworn to defend.”⁴ This message contradicted MacArthur’s assurances of total loyalty that he had given the President upon his assumption of command of UN forces in 1950 and the foundational principle that civilians and not generals control the military policy of the United States.

Truman’s charge of insubordination, in light of the general’s own words, appeared highly credible. Truman’s decision to replace MacArthur with General Matthew Ridgway in 1951 settled demonstrably the questions of allegiance and authority that the General had posed. If MacArthur had seemed invincible in the heady days of his early victories before Chinese intervention in Korea, his relief could serve as a warning to any military commander hoping to usurp the authority for deciding what goals the United States would pursue in the future events of the war. The responsibilities for waging the

³ Time writers, “The Little Man Who Dared,” *Time*, 23 April 1951, 23-26.

⁴ Max Hastings, *The Korean War* (New York: Simon and Schuster, 1987), 233.

wars, negotiating the terms of peace and determining the ultimate objectives of military operations would rest thereafter unquestionably in the hands of the Commander in Chief, to whom the Constitution entrusted those duties. To the military and civilian high command, the Korean War represented a test of authority whose verdict came swiftly, clearly and decisively. No general since MacArthur has questioned in such open terms the nature of his responsibilities and the loyalty that he owes to the civilians who control the United States military. General Ridgway, who replaced MacArthur, took care to execute military operations in close concert with the policies that President Truman prescribed.

Over the course of the Korean War, over 22,000 American military personnel died from various non-battle causes, including over 1,500 who died in aircraft crashes. Diseases claimed a considerable share of the lives from non-hostile causes, but the arrival of new vaccinations and medical procedures reduced the death toll from disease on the UN side to a fraction that of former wars.⁵ On a seasonal basis, diseases took a toll in spite of the best efforts of the medical personnel who established hospitals as near to the front lines as possible. The National Archives Records Administration kept a reliable record of aircraft crash deaths, but most other non-hostile losses commanders relegated to a single designation, “non-battle deaths.” Due to a lack of precise records, trends in vehicle accidents, weapons accidents, and most other non-hostile causes are difficult to identify. In the area of friendly fire deaths, however, two trends prevailed on the battlefield. The most costly cases of friendly fire involved close air support (CAS) missions and many friendly fire incidents occurred between units of different nationalities.

⁵ Paul M. Edwards, *The A to Z of the Korean War* (Lanham, MD: Scarecrow Press, 2005), 48.

Although the Armed Forces kept almost no records of vehicle accident deaths, one incident took a conspicuous toll on the day that the U.S. Eighth Army lost its commander, General Walton Walker, in a jeep accident in December 1950. General MacArthur summoned General Matthew Ridgway to command the Eighth Army on extremely short notice. In addition to the non-battle casualties, the UN forces suffered a number of deaths in friendly fire incidents. As would prove true in later wars as well, friendly fire often involved fighter and bomber pilots firing on friendly ground troops due to inadequate or defective methods of identification. The well-known problems of the fog of war: disorientation, confusion, lack of information, and rash decision-making, often multiplied in the heat of battle when a pilot knew that friendly forces on the ground required his assistance. Sadly, the pilots' zeal at times resulted in fratricide.

For the ordinary American soldiers and airmen suddenly called into combat in 1950, the battlefield presented a spectacle of utter chaos. In the wake of the North Korean attack, South Korean civilians fled south, carrying their few worldly goods on their backs. ROK soldiers differed little in conduct from their civilian counterparts in all but uniforms. Although a few ROK units mounted brief defenses, their instances of bravery proved few and isolated. The tide of North Koreans in Soviet-made T-34 tanks overwhelmed, engulfed, and annihilated the meager ROK defenses. The first Americans to reach the scene flew in fixed-wing attack aircraft, equipped to render aid to the embattled ROK soldiers, but unable to communicate with them. In the absence of forward air controllers, the pilots of the U.S. Air Force chose whether to watch the headlong retreat of the South Koreans or to launch close air support sorties blindly.

Taking the initiative, these pilots dropped ordnance on ground targets that they had imperfectly identified from the air. The pilots attempted to determine which masses of troops on the ground were friendly and which belonged to enemy North Korean forces. In some cases, their weapons landed harmlessly in rice paddies where no troops of either side had taken shelter, but in others, they fired accidentally on friendly ROK troops.⁶ This mistaken bombing and strafing of friendly forces by American pilots represented the first case of non-hostile casualties on the UN side in the Korean War. The swift and panicked retreat that characterized the early days of the war caused massive confusion on the South Korean side of the war and contributed integrally to these first casualties.

The problems with tracking statistics on Korean War non-hostile casualties involve the multiple intersecting ways that the various units recorded casualties. Army units at the front recorded numbers of battle and non-battle casualties, but seldom did they elaborate on the precise types of non-battle incidents that led to casualties. Their fratricide losses fell in the same category with their battle casualties, so the number of fratricide casualties remained hidden for most units and most events. In a number of cases, units did not even record non-battle casualties, even though their records contained anecdotal stories of non-hostile deaths.⁷

The only non-hostile deaths that the National Archives Records Administration recorded during the Korean War came from aircraft crashes, which accounted for roughly 1,500 of 22,617 non-battle deaths. Episodic and anecdotal stories in the various accounts of the war record some sixteen separate incidents of fratricide, of which only seven gave estimates regarding the number of men killed, but at least 13 likely produced fatalities.

⁶ Max Hastings, *The Korean War* (New York: Simon and Schuster, 1987), 72.

⁷ William M. Donnelly, "Thunderbirds in Korea: the U.S. 45th Infantry Division 1950-52," *The Journal of Military History*, 64 (October 2000): 1126, 1137.

The seven episodes that recorded specific death tolls account for 410 lives, but in a war that featured over 33,000 Americans killed in action and over 15,000 captured or missing, this number is quite low. The specific numbers are difficult to calculate. Sadly, records contain only the numbers of casualties that seemed significant at the time. Instances of fratricide in Korea, a war following rapidly on the heels of the brutal Second World War, did not, for the most part merit recording in the estimation of the Armed Forces commanders at the time. Instead, most commanders lumped together their fratricide casualties along with hostile losses under the heading of “battle losses.”⁸

The deaths by aircraft crashes followed a predictable pattern in keeping with the rise and fall of air traffic in and out of Korea. Fewer than 10 American servicemen died in aircraft crashes in June 1950, but the death toll rose steadily to its peak at 42 deaths in November 1950 when the flow of American troops into Korea had recently peaked. The many aircraft crash deaths during the first six months of the war reflected the operations to reinforce the Pusan Perimeter, to supply troops preparing for the Inchon landing, and to establish and solidify systems of supply for the Eighth Army after the Inchon landing. The logistical operations for the Inchon landing accounted for the considerable leap in losses from August to September 1950, but aircraft crash losses continued to mount after the largest troop concentrations had finished arriving in Korea. Losses exceeded 20 deaths and twice exceeded 30 deaths for the four months following the Inchon operation. This trend reflected the heightened tempo of logistical aircraft during that stage in the

⁸ Paul M. Edwards, *The A to Z of the Korean War* (Lanham, MD: Scarecrow Press, 2005), 48.

campaign. High operations tempo under stressful circumstances can hinder the efforts of aircraft maintenance crews and decrease the safety of pilots and passengers.⁹

There is another possible explanation for the particularly large peaks in aircraft crash losses in November 1950 and April 1951. As shown in Table 2.1, the death toll for these two months nearly doubled the losses of the previous month. It is possible that a few large aircraft crashes could have affected the entire month's losses disproportionately. As later happened in Operation Iraqi Freedom, during which one Chinook helicopter crash multiplied the total non-hostile losses of the entire month, a few large crashes in Korea might have done the same. This single catastrophic crash explanation might suffice for April 1951. The losses of November 1950, coinciding with the advance of large numbers of Chinese troops, likely reflect the high mission demand of an Air Force flying extra combat missions in addition to supplying logistical support to UN forces that had nearly reached the Korean border to the north. For the most part, aircraft crash death numbers mirrored the tempo of operations for the Eighth Army at large.¹⁰

The 11 losses of February 1951 represented a low number of casualties as the UN forces retreated south to escape the Chinese advance and winter weather likely permitted few flights. At this time, UN supply lines were shortening, so it is reasonable to suppose

⁹ Having extended friendly battle lines deep into hostile territory at Inchon, the Eighth Army needed rapid and abundant supplies in order to set up bases from which to conduct major combat operations. The available ground assets could not supply friendly forces as far forward as Inchon for a few months because remnants of the retreating North Korean forces lay between Pusan and Inchon. Therefore, the Air Force carried out an unusually high operations tempo until ground supply centers resumed the primary supply mission. National Archives and Records Administration, "War/International Relations: The Korean War," *Access to Archival Databases*, available from <http://aad.archives.gov/aad/display-partial-records.jsp?f=519&mtch=1524&q=aircraft&cat=WR27&dt=194&tf=F&bc=sl,sd>; Internet, accessed 21 August 2007.

¹⁰ National Archives and Records Administration, "War/International Relations: The Korean War," *Access to Archival Databases*, available from <http://aad.archives.gov/aad/display-partial-records.jsp?f=519&mtch=1524&q=aircraft&cat=WR27&dt=194&tf=F&bc=sl,sd>; Internet, accessed 21 August 2007.

that logistical concerns demanded fewer flights. Deaths increased considerably over the following several months, however, as General Ridgway directed the construction of defenses and prepared for his incremental offensive to drive the Chinese and North Koreans out of South Korea. Aside from the large spike in losses in April, aircraft crash deaths followed a relatively stable pattern from March to July and increased steadily until October 1951, when they peaked and began to decline. In that month, the UN forces achieved one of President Truman's chief objectives: the Communists agreed to convene peace talks for a negotiated end of the war.

After October 1951, crash losses decreased gradually throughout 1952 and the first half of 1953. The front was stable during these months, supply lines were not lengthening, and the operations tempo had grown predictable for the pilots and the maintenance crews charged with keeping aircraft in working order. The decreasing losses of the period from November 1951 to June 1953 followed the exact trends that one would expect considering the UN tempo of operations. Ridgway's 1951 strategy of incremental advance had slowed to a tactical strategy of taking one hill or ridge at a time, which fostered a very predictable environment for aircraft operations. True to form, aircraft crash losses again increased from six to 37 from June to July 1953, as the Air Force began returning soldiers to the States following the ceasefire agreement. For the first time, in August 1953, the American Air Force lost no lives to aircraft crashes, but relatively low losses returned in September and October of that year and increased again in November.

The largest spike in aircraft crash deaths reporting came in December 1953, when the Armed Forces reported 254 fatalities from aircraft crashes. This number neared the

combined total reported losses of the last eighteen months, and officials reported the vast majority of the December aircraft losses on December 31, 1953. Presumably, this phenomenal death toll resulted from Armed Forces officials' adhering to a deadline for reconciling their numbers of losses. In a few hundred cases, the Air Force had listed pilots and air crewmen as missing pending further investigations. December 31, 1953, seemed to be a logical date for terminating search and rescue operations or updating numbers of pilots and air crewmen whose deaths such missions had confirmed.

Additional reports in January and February 1954 also reflected unusually high death numbers, each exceeding 100. It makes sense that in December, officials extended some investigations of missing and presumed dead airmen for one or two months so that the high death reports for January and February represented additional reconciliations of these numbers. In March, the 44 aircraft crash deaths nearly doubled the totals of each of the two succeeding months, so the death reports for March may well have included a few numbers reconciliation cases in addition to deaths from crashes that actually happened in March.

This phenomenon of the enormous spike in the casualty numbers from December 1953 to February and possibly March 1954 reveals the limitation of the National Archives records. By tracing aircraft losses by when Armed Forces officials reported the crews dead, rather than when the incidents occurred that caused their deaths, the database throws into doubt the numbers for the preceding months. All things assumed to be equal, however, the difference between the reported numbers for each month and the true numbers made a negligible difference in reflecting the trends of aircraft death numbers. Although some deaths went unreported until the end of 1953, thereby artificially reducing

the death toll for some preceding months, it is safe to assume a relatively even distribution of these under-reported deaths. Factoring in this trend of under-reporting, the numbers of aircraft crash deaths for each month should be larger, but the trends likely remain predictable. Thus, as the trends in the available data show increased deaths as logistical operations increased and vice versa, the trends make sense even if the total number of monthly losses at times did not reflect the full number of deaths.

Equally difficult to determine are the numbers lost to disease. The hospitals recorded what percentage of all of their patients - both battle and non-battle - survived treatment and in some cases documented how many of their patients suffered from disease rather than bullet wounds. The 1st Mobile Army Surgical Hospital (MASH) reported treating 3,000 patients for all causes in May 1951. Two-thirds of the patients had suffered combat-related wounds, but the MASH did not record the numbers of dead distinguishing between hostile and non-hostile causes. The hospitals seldom specified how many of their patients they lost to illnesses. During the winter of 1950-1951, the 121st Evacuation Hospital reported a death rate of only 0.2 percent for all of its patients, including disease and combat-related injuries.¹¹ The rates and numbers of losses to most diseases remained small and few hospitals recorded them precisely.

The Army Medical Corps improved its battlefield casualty treatment tactics by developing the MASH concept, improving casualty evacuation methods, employing modern drugs, and organizing preventive medicine campaigns. During the Second World War, the best facilities for treatment seemed to congregate far behind the lines of battle at a time when the Army lacked rapid evacuation methods. The MASH units provided the

¹¹ Albert E. Cowdrey, *The Medics' War: United States Army in the Korean War, Volume 4*, (Washington, DC: U.S. Government Printing Office, 1985), 130, 170.

soldiers a cohesive, coordinated, and swift system for casualty evacuation and treatment, employing helicopters in small numbers for the first time. Most importantly, the MASH could follow advancing troops better than had any hospitals in past wars. Not only did soldiers receive treatment promptly near the front, but their treatment included major surgeries that saved countless lives. During the Second World War, 4.5% of all wounded men who reached medical installations died. In Korea, the MASH units cut this figure to 2.5% in 1951 and 1.8% in 1952.

The Army Medical Corps proved adept at preventive medicine, setting in place standard procedures that the Army would use in future wars as well. In addition to vaccinating soldiers against smallpox and other contagious diseases, the Medical Corps sprayed DDT and thereby reduced the instances of malaria among the soldiers. When the soldiers contracted the disease, the chloroquine tablets that medical personnel prescribed initially for malaria did not kill the malarial parasites. Evacuated soldiers took malaria with them to Japan, where the rate of malaria increased as the rate in Korea declines. In 1953, new primaquine treatments managed to kill the malarial agents so that evacuated troops did not carry the disease abroad with them. The primaquine doses cut the instances of malaria among American military personnel from 10,000 in 1952 to 878 in 1953, so that malaria no longer took a toll on mission readiness. The anti-malaria campaign represented one of the most significant medical victories of the war.¹²

Although typhus and typhoid ravaged the Chinese Communist Forces, (CCF) the Americans observed almost no cases of these among their troops. The worst mass outbreak that the UN forces faced occurred in 1950 as the 24th Infantry Division defended the Pusan Perimeter. Diseases related to defective water purification tablets at one time

¹² Ibid., 340.

incapacitated one fourth of the men in the 24th Infantry Division at a time when the few defenders needed every man as healthy as possible. Medical personnel responded quickly and administered vaccines against encephalitis, among other ailments, and produced better water treatment methods.¹³ A few soldiers contracted smallpox, diphtheria, dengue, relapsing fever and meningitis, but all outbreaks remained at manageable levels and few resulted in deaths. One American soldier died of polio and another from tetanus, but for the overwhelming majority of units and personnel, disease proved mostly a nuisance and not a serious threat to manpower.¹⁴

The early summer months of 1951 brought an unusual disease that frustrated the best efforts of the Army Medical Corps on a semi-annual basis for the duration of the Korean War. Sudden outbreaks of epidemic hemorrhagic fever hospitalized nearly nine hundred soldiers and took over 300 lives during the year 1951. Following its policy of specialization, the Medical Corps assigned the 8228th MASH to find the cause and cure of the disease, but the unit did not succeed in so doing. Based on the rates of infection and death that the 8228th Mobile Army Surgical Hospital (MASH) recorded, epidemic hemorrhagic fever claimed 327 lives in 1951 and 46 lives in 1952. Although the doctors never found the vector or a cure for this deadly seasonal disease, the nurses succeeded in developing standard operating procedures for treatment that cut the death rate enormously between 1951 and 1952.¹⁵ By monitoring and treating the patients' symptoms attentively, the nurses managed to increase the recovery rate enormously and reduce the impact of epidemic hemorrhagic fever. For the following two years, soldiers came down with the disease during every spring and autumn season, but the Medical

¹³ Ibid., 75, 99.

¹⁴ Ibid., 147, 183.

¹⁵ Ibid., 186.

Corps managed to cut the mortality rate to 7% from its initial 20% through attentive nursing and close monitoring of the patients' symptoms.¹⁶

During the Second World War, American physicians experienced a mortality rate of 11-15% during neuro-surgical operations. The 121st Evacuation Hospital, which specialized in neuro-surgical operations, managed a mortality rate of 8.5%. Another particularly impressive innovation was the deployment for the first time of an artificial kidney machine to a forward area. Employing this device, the 11th Evacuation Hospital in Wonjin, Korea cut the Second World War death rate of 90% for kidney patients to 66%.¹⁷ While still a majority, this casualty rate nevertheless represented a significant improvement over previous wars.

Another medical improvement from the Second World War concerned the treatment of venereal disease (VD), with the new "miracle" drug penicillin. After the adverse experiences with VD during the Second World War, medical personnel ensured that they maintained ready access to the drug. Conveniently, the rate of VD always reflected inversely the combat activity of any given military unit. In other words, very few soldiers contracted VD while actively engaged in combat operations. When soldiers had more free time away from combat, they tended to contract venereal diseases in larger numbers. Even during the calmest periods of the war in terms of combat activity, the rate of hospitalization due to VD never surpassed 5% however, so venereal disease exerted a relatively minimal influence on the UN war effort.¹⁸

As a result of the Medical Corps' efforts, the UN forces never suffered truly devastating epidemics throughout the war. These trends affected peace negotiations, as

¹⁶ Ibid., 185-187.

¹⁷ Ibid., 173, 205, 255.

¹⁸ Ibid., 249.

the Chinese repeatedly demanded that the Americans admit to committing acts of germ warfare. The Chinese justified the charge by pointing out that epidemics had devastated the Chinese and had not done the same to UN forces.¹⁹ The MASH concept emphasized specialization in every area of treatment. In particularly difficult cases, an entire rear-echelon medical installation studied only one disease or other ailment and sought to solve problems that plagued the entire Army. Through the MASH concept and air evacuation, the Army corrected some of the troubles of the previous war, employed new technology, and set the stage for the innovations of the next war.

As has been the case with other wars as well, fratricide statistics for the Korean War can prove difficult to substantiate because they fall by classification in neither the hostile nor the non-battle realms. Generally, units included their fratricide losses with hostile deaths under the classification “battle casualties.” The instances in which allies from different nations fired on one another could also create difficult diplomatic and political international situations. As is usually the case, the fog of war that naturally accompanies rapidly moving military formations fostered fratricide by UN troops of different nationalities in adjacent units.

The first year of the Korean War involved enormous displacements of troops of both sides, as the ROK troops retreated south to the Pusan Perimeter, turned the flank of the North Korean Peoples’ Army (NKPA) at Inchon, and drove into North Korea. The front lines changed their locations repeatedly and rapidly, so that aircraft pilots attempting to furnish close air support sometimes could not distinguish between friendly and enemy troop formations. The multi-national composition of the UN forces further complicated the target identification process. After the Chinese entry into the war and

¹⁹ Ibid., 247, 304.

the retreat from North Korea south to the vicinity of the 38th Parallel in 1951, the front stabilized tangibly. General Ridgway's strategy for his offensive in 1951 called for incremental advances to take well-defined and limited ground objectives during the final two years of the war. Consequently, the rates of fratricide incidents declined considerably in this final phase of the war.²⁰

The ROK and American retreat in the summer of 1950 created a great deal of confusion that led to multiple instances of fratricide. The first instance happened largely because the aircraft had no forward air controllers (FACs) to direct them to ground targets. Knowing the severity of the situation, however, the pilots assumed a high level of risk by deploying their ordnance on unidentified troop formations. This first case of air-to-ground fratricide on June 29, 1950, involved Republic of Korea (ROK) troops and American airplanes as the ROKs crossed the Han River near Seoul. The bombs, napalm and bullets cost the South Koreans a number of lives, but the air strikes also signaled that the Americans had committed to fight for the security of South Korea.²¹ A few days later, aircraft again fired on ROK forces in multiple episodes, killing an estimated two hundred soldiers and destroying thirty ammunition trucks on the July 3. A few days later, the American Far East Air Force (FEAF) fired on American troops of the 21st Infantry Regiment as they retreated from the positions they had occupied in Taejon on the Kum River Line of defense. In the latter instance, the 11th Field Artillery also fired on the friendly formations. The lack of FACs for the aircraft and forward observers (FOs) for

²⁰ Matthew B. Ridgway, *The Korean War: How We Met the Challenge, How All-out Asian War was Averted: Why MacArthur was Dismissed, Why Today's War Objectives must be Limited* (Garden City, NY: Doubleday, 1967), 111.

²¹ T. R. Fehrenbach, *This Kind of War: A Study in Unpreparedness* (New York: The MacMillan Co., 1963), 84.

the artillery did not pose a problem this time. Rather, the FOs and FACs had both identified a friendly element as a hostile target and directed fire onto it.²²

Panic contributed materially to friendly fire episodes, particularly in a case on July 7, 1950, as the 3rd Battalion 34th Infantry Regiment attempted to fight a delaying action against the oncoming North Koreans. The Regimental Operations Officer, Major Dunn, moved forward of 3rd Battalion's defensive position with one rifle company and the battalion's scout platoon to gather intelligence about the enemy dispositions. Suddenly, as he returned from the reconnaissance, his own mortar operators began firing on his small band. Upon arrival in the battalion command post, Major Dunn found the entire battalion in retreat and could not find the commander or executive officer. He took charge of marching the battalion back to its defensive position, but he and part of his battalion suffered capture in the ensuing battle. Upon investigation, it appeared that the battalion mortar operators had decided to fire upon any troops in front of them, and the battalion commander and his staff had chosen to retreat personally even before a general engagement had begun.²³

After the UN forces had consolidated their defenses around the Pusan Perimeter in 1950, two American units suffered from friendly fire due to misidentification of the front lines by air and ground forces. The 19th Infantry Regiment and the 3rd Battalion 29th Infantry Regiment endured salvos from both the air and the ground as they attempted to hold their positions on the Pusan Perimeter and called for supporting fires from artillery and air assets against the attacking NKPA units. In each case, the fires from friendly units failed to hit the enemy units exclusively. The 1st Marine Brigade arrived from

²² Clay Blair, *The Forgotten War: America in Korea 1950-1953* (New York: Times Books, 1987), 99, 113.

²³ T. R. Fehrenbach, *This Kind of War: A Study in Unpreparedness* (New York: The MacMillan Co., 1963), 117.

Japan in August 1950 to help consolidate the American and Republic of Korea positions around Pusan. The Marines served as a mobile reserve, termed the Fire Brigade, but in some cases also carried out missions to seize key terrain features then held by the NKPA.

In one such instance, one of their commanders forbade the use of close air support because of previous friendly fire episodes. Captain John Stevens, commander of A Company 1st Battalion 5th Marine Regiment, argued successfully that he would lose more men from enemy fire without an air strike than he might lose from friendly fire if the air strike proceeded. The Marine Corsair pilots performed a careful bombing raid, sending pilots on dry runs over the target area before making their bombing runs. Even so, they killed one of their own men by dropping a bomb too near the Marine positions.²⁴ As the front along Pusan stabilized, the friendly fire episodes dwindled, and the Americans prepared for the next stage of the war.

General MacArthur designed a bold flank attack that could cut off the North Korean supply lines, seize a key piece of terrain, and turn the tide of the war strategically. The port city of Inchon satisfied all of these goals because of its location near the capital city of Seoul, behind enemy lines and near enemy supply routes. The Inchon landing remains one of the best-executed amphibious operations in the history of the United States Armed Forces. The terrain dictated that the invading forces land in two phases to be executed several hours apart in order to coincide each phase with a period of high tide. In the first phase, Marines would take the major external terrain feature of the port, Wolmi-do Island, so that the second phase could supply additional ground troops for the invasion of the mainland portion of Inchon. The Marines tasked with taking and holding Wolmi-do Island expected strong resistance and planned and rehearsed accordingly. The

²⁴ Ibid. 197

naval gunners on the landing craft, likewise, expected to engage a number of North Korean defenders on the island as the Marines fought for control of the critical feature of the port. However, the North Koreans had not assigned a large force to defend Inchon, so the Marines took the island quickly with little resistance. Sadly for the Marines, a number of gunners on naval vessels showed excessive zeal for their support-by-fire mission and fired into their own men as the Marines consolidated control of the island. The 20 Marines killed by friendly fire outnumbered the few men that the North Koreans killed during that battle.²⁵

The relatively easy seizure of Inchon gave the UN forces the initiative in the Korean War as they drove the NKPA forces north of the 38th Parallel and deep into their own territory. Victory over North Korea appeared imminent as lead elements of the American and ROK units reached the Yalu River, which formed part of the border between China and North Korea. Chinese entry into the war in overwhelming numbers in the late months of 1950, however, forced the UN troops to retreat south. In some units, a spirit of panic reminiscent of the summer retreat of 1950 contributed to additional friendly fire episodes. The ROK troops repeatedly failed to defend their positions, fleeing in complete disorder before the attacks by superior numbers of Chinese troops.

On November 26, 1950, the II Corps of the ROK Army fled so rapidly that the Turkish Brigade assigned to defend a portion of the UN front lines mistook them for attacking Chinese Communist troops. As the Turks fired into the ROKs, adjacent UN commanders heard jubilant reports on the radio that the Turks were defeating and destroying their “attackers” with heavy losses. Before the ROKs had convinced the Turks of their fratricidal error, the pursuing Chinese Communist Forces (CCF) arrived in

²⁵ Clay Blair, *The Forgotten War: America in Korea 1950-1953* (New York: Times Books, 1987), 272.

overwhelming numbers and began over-running the Turkish positions. The numbers of UN troops killed by hostile fire versus fratricide are impossible to calculate because the ROK II Corps and the Turkish Brigade ceased to exist as effective units in the onslaught of the CCF. Nearly all of the UN soldiers present in that engagement suffered death or capture.²⁶

Over the following several months, the UN forces retreated to defensive positions south of the 38th Parallel, preparing to relinquish Seoul to Communist control again. As the American 2nd Infantry Division and a large force of ROK infantry advanced south on the road between Sunch'on and Kunu-ri, CCF troops attempted to cut off and surround the units. The Chinese had established a road block at the south end of a mountain pass four hundred meters long. Fifty-foot cliffs lined both sides of the pass, termed the "gauntlet," and its seizure appeared essential to the survival of the UN forces in retreat. An ROK infantry unit assaulted the cliffs, but suffered a setback when American tanks in support fired on them. Subsequent attacks cleared a path out of the gauntlet, but American aircraft fired on friendly forces twice more as the battle for the high ground intensified. American troops chose in a number of cases to abandon their equipment and save their own lives.

The Air Force established the policy of never allowing abandoned equipment to fall intact into enemy hands. Instead, the aircraft would destroy the abandoned equipment to prevent the Chinese from using it and obstructing the progress of the Chinese pursuers. In the most tragic such case, medics of the 2nd Medical Battalion, 2nd Infantry Division came under fire in the gauntlet and leaped from their vehicles to return

²⁶ T. R. Fehrenbach, *This Kind of War: A Study in Unpreparedness* (New York: The MacMillan Co., 1963), 318.

fire against the CCF on both sides of the road. They had left 180 wounded men in their trucks, whom they had been evacuating south. After a period of inaction on the part of the trucks, the American pilots overhead decided to destroy the apparently abandoned vehicles. The largest single case of friendly fire in the Korean War resulted, as the pilots dropped napalm and killed all 180 wounded men on the trucks.

As the 2nd Infantry Division fought for the gauntlet, the invading Chinese troops had simultaneously attacked the American 1st Marine Division in the Chosin Reservoir and surrounded Marine units in three separate locations. The besieged Devil Dogs fought a desperate battle and called frequently for close air support (CAS), including napalm strikes on Chinese formations. Most of the CAS missions succeeded in targeting only enemy units, but one napalm canister killed two Marines. Friendly fire from the air also took the life of a medic one month later after the Red Cross emblems fell off of the roof of his ambulance. As he moved to re-fasten the panels, a pilot fired on him. The ground commanders did not complain about these mistakes through official channels, for like the earlier Pusan Perimeter incident, the air strikes definitely saved more lives than they took.²⁷

By the beginning of the year 1951, the infantry units in the UN forces had identified the dangers of CAS and had begun attempting preventive measures. As UN forces retreated in early 1951, the British Brigade held a salient in the UN lines as the ROK troops retreated on their flanks. The British called on the radio for CAS missions that could prolong their stand by destroying Chinese ground units. While the pilots sought visual confirmation of their targets, the British troops threw smoke grenades to

²⁷ Albert E. Cowdrey, *The Medics' War: United States Army in the Korean War, Volume 4*, (Washington, DC: U.S. Government Printing Office, 1985), 121, 161.

mark targets for the aircraft. In subsequent wars, ground troops adopted the technique as a standard operating procedure for marking both friendly and enemy positions in the course of CAS missions. The technique to prevent fratricide succeeded, but tragedy waited later in the day as the British troops tried to reach friendly lines. When they approached the new front line, American tanks fired into them, killing at least 6, and wounding several others.²⁸ This episode in April 1951 was the last recorded fratricide incident, as the UN forces consolidated their defensive positions south of the 38th Parallel. In the following months, General Ridgway planned attacks with limited goals and maintained tight control on his units. This technique sometimes caused commanders to make piecemeal attacks, but it minimized the instances of units mistaking friendly elements for the enemy.

Unlike the aftermath of Operation Desert Storm, the Armed Forces did not conduct formal investigations of friendly fire episodes in the Korean War and generally reported the victims of friendly fire along with other battle casualties. Commanders expected and tolerated a certain amount of friendly fire as long as it did not appear intentional or due to negligence. The United States government did, however, issue an official apology to the Turkish government for the destruction of the Turkish Brigade by the North Koreans. Reportedly, the Turks did not understand the apology because they expected to take casualties in war – even the near annihilation that their men suffered in November, 1950.²⁹

Aside from fratricide, the only other non-hostile casualties that happen on the battlefield involve accidents with ordnance, which the soldiers of the Korean War

²⁸ Clay Blair, *The Forgotten War: America in Korea 1950-1953* (New York: Times Books, 1987), 847.

²⁹ T. R. Fehrenbach, *This Kind of War: A Study in Unpreparedness* (New York: The MacMillan Co., 1963), 319.

experienced in small numbers. Very few units recorded specific cases, but the fatal episodes involved failure to adhere to basic safety regulations. The Army mandates specific methods for the safe disposal of unexploded ordnance and the deployment of live ordnance, but two cases of carelessness cost the concerned units in lives. The 45th Infantry took over control of one portion of the UN lines in December, 1951, relieving the 1st Cavalry Division. Although they manned a line facing hundreds of thousands of enemy combatants, the first casualties of the 45th Infantry occurred because of unmarked friendly minefields. The 1st Cavalry units had simply not identified the minefields that they had set up to their relieving units.³⁰ In another series of incidents, in October and November of 1950, fires where the soldiers burned trash cooked off unexploded ordnance (UXO) munitions. The simple negligence of soldiers placing garbage in disposal places with UXOs endangered several lives and cost a few.³¹

While the soldiers in Korea fought against the Chinese troops, diseases, and the cold weather, the Generals and politicians charged with prosecuting the Korean War debated the nature, goals and significance of the war. What General MacArthur saw as an epic battle against all of the Communist governments in Asia, President Truman viewed in much more limited terms. At the outset of war, MacArthur's military calculations concerning the significance of Korea in light of Japan's security mirrored the political and diplomatic thoughts of President Truman and his cabinet. In 1950, both the President and the General agreed that the American forces in Japan should drive the

³⁰ William M. Donnelly, "Thunderbirds in Korea: the U.S. 45th Infantry Division 1950-52," *The Journal of Military History*, 64 (October 2000): 1124.

³¹ Albert E. Cowdrey, *The Medics' War: United States Army in the Korean War, Volume 4*, (Washington, DC: U.S. Government Printing Office, 1985), 108.

North Koreans out of South Korea, but the final goal of an invasion of North Korea was a point of contention.

The first major decision would set a tone that made future negotiations between the two more difficult. MacArthur's famous charisma and contagious confidence that had persuaded President Roosevelt to invade the Philippines instead of Formosa during the Second World War again served him well as he persuaded President Truman to authorize a very risky amphibious landing. Inchon, a port city whose proximity to Seoul gave it strategic and political significance, was militarily the most difficult location for an amphibious operation that any American commander had ever chosen. The extreme tides rendered a beachhead inaccessible for several hours during low tide every day, but, MacArthur argued, the very difficulty of the operation would preserve the element of surprise for the UN invaders. Inchon, located far behind enemy lines, possessed enormous logistical significance to the UN troops as they could use a landing there to cut the North Korean soldiers off from their supply lines in the north and pursue them across the 38th Parallel. According to General Ridgway's memoir of the war, MacArthur argued during his August 6-8 meeting with Truman that the severe Korean weather would claim a number of lives if the war were allowed to last through the winter. His Inchon landing, then, would prevent non-hostile losses due to cold weather by ending the war before winter began. Thus, the possible toll of non-hostile casualties first played a part in the arguments and decisions of the American Armed Forces high command.³²

The American Armed Forces executed the Inchon amphibious operation with such unqualified success that MacArthur began to appear invincible both on the field of battle and in conferences on strategy. A headline in the *New York Times* on October 30,

³² Ibid., 36.

1950, took ultimate victory for granted and rendered the credit to MacArthur. Hanson Baldwin's story "MacArthur's Success in Korea Analyzed," credited MacArthur's brilliant Inchon operation with winning the war, prematurely as the Chinese proved.³³ General MacArthur's clash with President Truman partly resulted from MacArthur's attitude of superiority and partly from disagreements over strategy. President Truman had determined that the UN forces would pursue no objective beyond the protection of South Korea and would not enforce a blockade on China or support Chiang Kai Shek in an invasion there, as MacArthur had advocated. Upon assuming command of the UN Forces in place of MacArthur, General Ridgway proved more willing to execute the wishes of his superior regardless of his personal opinion about policies. For diplomatic and political reasons, Ridgway waged a cautious campaign calculated to minimize United Nations casualties and assist the negotiations of the representatives of the United States and South Korea at the peace talks.

The expansion of the Korean War brought demands for additional manpower in all military specialties, combat and support. The military draft targeted not only young men of military age but also physicians for service in the Army, Navy, and Air Force Medical Corps. When recruiting doctors and nurses for the war, the Medical Corps sought personnel skilled in treatment regardless of their military backgrounds. Hoping above all to attract the best possible doctors, the Medical Corps emphasized the medical experience that doctors would gain through service and targeted certain specialties. Army recruiting campaigns portrayed Army doctors as simply doctors who put on green uniforms when they had left surgery. Medical Corps recruiting efforts minimized the dangers and deprivations of Army life, and, unfortunately, the training program for

³³ Hanson Baldwin, "MacArthur's Success in Korea Analyzed," *New York Times*, 30 October 1950, A3 (L).

medical personnel reflected the same attitude. As a result, a number of medical personnel arrived in highly dangerous forward areas without more than a casual knowledge of field living conditions, treatment of wounds peculiar to battle, and weapons employment in case of an emergency.³⁴ The new draftees learned the harsh realities of war first hand the hard way.

When a number of hospitals came under fire from the Chinese forces and American medical personnel manned the perimeter of their bases to return fire, the Chinese soldiers killed a number of them who had completed only minimal training on the proper use of weapons. Major General Harry Armstrong, the Surgeon General of the Army, reacted to this problem of minimal field training after Chinese troops killed his son-in-law in exactly these conditions. Commanders of medical units thereafter adopted programs of field training lasting between three and eight weeks to teach field craft and medicine in forward area conditions to draftees and doctors newly initiated into military life. The Korean War re-taught the age-old lesson that every soldier in uniform might come under fire and need to be able to defend himself.

According to a number of reports, often the Chinese and North Koreans appeared to target intentionally medical personnel and evacuation vehicles with Red Cross emblems painted on them. In a number of cases, medics covered the Red Cross emblems on their ambulances so as to prevent the Chinese from concentrating fire on them. The Western tradition, enumerated in the Geneva Conventions, that combatants regard medical personnel as neutral entities, had no place in the war that the Chinese and North

³⁴ Albert E. Cowdrey, *The Medics' War: United States Army in the Korean War, Volume 4*, (Washington, DC: U.S. Government Printing Office, 1985),188-192.

Koreans fought.³⁵ Whether or not the Chinese had developed specific procedures for targeting medical vehicles is difficult to ascertain, but they did not withhold their fire. The red and white panels on the sides of ambulances made them easy targets. The medics chose to cover the panels because the enemy troops had obviously decided on a routine basis not to respect the conventions of civilized warfare. In the next war, the North Vietnamese likewise fired on medical evacuation helicopters so frequently that some commanders refused on multiple occasions to send their Red Cross-marked Huey helicopters into hot landing zones.³⁶

The Army attempted to prepare its soldiers for facing the weather conditions in Korea, but faced similar problems to those of the Medical Corps as it tried to prepare its own personnel. Anticipating the severe temperatures typical of Korea before the winter of 1950-51, the Far East Command distributed to the troops a pamphlet titled, “Cold Facts for Keeping Warm.” Accounts from the Marines’ operations in the Chosin Reservoir reported that the cold caused as many casualties as did the enemy. The winter foot gear, items called “shoe packs” contributed to the many cases of frostbite that cost toes and lives. After the Marines had made the trek out of the Chosin, 200 suffered severe enough conditions to merit hospitalization, but the Armed Forces did not record the precise numbers of deaths caused exclusively by the cold.³⁷ One estimate places the total number of cold weather injuries at 7,285 for the entire war, with white Southerners and African-American soldiers more susceptible to injury than their Northern counterparts. By the third winter of the war, the Army had developed better winter shoes

³⁵ Ibid., 75.

³⁶ Moore, Harold G. and Joseph L. Galloway, *We Were Soldiers Once...And Young* (New York: Harper-Collins Publishers, 1992), 363.

³⁷ Albert E. Cowdrey, *The Medics’ War: United States Army in the Korean War, Volume 4*, (Washington, DC: U.S. Government Printing Office, 1985), 116.

and improved warming facilities for the soldiers. The lessons of 1950-51 proved costly, but the Armed Forces did learn from them.³⁸

The most alarming case in which the threat of disease affected the policy of the UN forces began in February 1951, when an agent reported that some Chinese soldiers in North Korea had contracted and were dying from the Bubonic Plague. American doctors feared this news for its deadly implications and the plausibility of the report. Rumors held that rats in Manchuria carried the Black Death and that the Chinese soldiers might have brought it with them as they marched through Manchuria to North Korea. The Army Medical Corps had very few vaccine doses for the disease on hand and even the best vaccine lasted at most four months. The Black Death can spread easily, and the mortality rate among those infected approaches 100%.

General Crawford Sams, the 8th Army public health and welfare chief, embarked on a secret mission by sea to investigate the accounts of Black Death, arriving outside the blockaded port of Wonsan, North Korea, on March 9, 1951. In the following days, Sams slipped ashore and managed to question the agents who had initially reported the disease in which bodies turned black in death. The agent, an educated chemist, gave very precise symptoms reports that convinced Sams that the Chinese had not contracted the Black Death. General Sams concluded that the agents for South Korea had observed soldiers experiencing the final stages of smallpox; subcutaneous bleeding gave the victims their black skin coloring.³⁹

This false alarm, which discovered pervasive epidemics on the Communist side of the battle lines, foreshadowed a particularly unpleasant period during the negotiations at

³⁸ Paul M. Edwards, *The Korean War* (Westport, CN: Greenwood Press, 2006), 104.

³⁹ Albert E. Cowdrey, *The Medics' War: United States Army in the Korean War, Volume 4*, (Washington, DC: U.S. Government Printing Office, 1985), 175-177.

the peace table. After the front had stabilized and the two sides had agreed to peace talks in 1951, the Chinese representatives made repeated demands that the Americans admit to engaging in germ warfare. Citing the epidemics of smallpox, malaria, and typhus that ravaged their soldiers but not those of the UN forces, the Chinese alleged that the Far East Air Force was dropping bombs that contained germ agents. In the daily propaganda lectures that the Chinese delivered in POW camps, they announced that air raids had brought the current typhus outbreak and exacted some penalties on American POWs who had served in air crews.⁴⁰ The reasons for the shift in Chinese policy from mass ground attacks to propaganda campaigns came to light in time.

The Chinese leaders had developed an accurate perspective on the Americans' situation in relation to casualties, which they attempted to exploit. A dictator who did not face voters for approval at the ballot box, Mao Zedong could wage the war in Korea for as long as he desired, using conscript troops drafted from his enormous population and equipped, at least in part, with arms from Soviet Russia. President Truman, by contrast, faced a skeptical public that grew weary of the war with the passage of time and the increase in casualties. Whether caused by hostile or non-hostile means, casualties in Korea hurt the Truman administration's agenda for the prosecution of the Cold War. After the Chinese entered the war, Truman realized that the complete reunification of Korea under Syngman Rhee would prove excessively costly in casualties. Therefore, Truman sought an opportunity to negotiate a conclusion to the conflict as soon as possible.

⁴⁰ T. R. Fehrenbach, *This Kind of War: A Study in Unpreparedness* (New York: The MacMillan Co., 1963), 464.

In 1951, General Ridgway, who assumed overall command from the relieved MacArthur, understood his two missions: to gain ground at low cost in casualties and to inflict as many casualties on the enemy as possible. By minimizing American casualties in his operations, Ridgway would buy time for negotiations to proceed. By gaining ground and maximizing enemy losses, Ridgway's army hoped to force the Chinese to agree to a settlement of hostilities favorable to the Americans. Victories on the field of battle would give ammunition to the negotiations efforts. Gains in ground would also demonstrate tangible progress in the war effort to maintain the morale of the American public.⁴¹

The Chinese agreed to peace talks after their decisive failure to capture territory in their offensive in May 1951. The great advantage that the Chinese had always enjoyed was the unreliability of the ROK troops, who often fled at the outset of hostilities, leaving weapons and equipment behind. Throughout the war, the Communists focused every major offensive on the ROK units, planning to break through the UN lines and wreak havoc with their hordes of infantry. In 1951, however, the strongly interlocked UN defenses employed very effective artillery and air attacks that halted, decimated, and repulsed the Chinese attackers after they had initially broken through the ROK 6th Division. The offensive in May 1951 gained no ground and cost Chinese forces dearly in manpower.⁴² Thus, a successful battlefield strategy by the UN forces compelled Mao to recognize limits in the amount of land he could seize and the number of casualties he would allow in a war that he might not be able to win. The loss of a total of 345 Soviet

⁴¹ Carter Malkasian, "Towards a Better Understanding of Attrition: the Korean and Vietnam Wars," *The Journal of Military History* 68 (July 2004), 925.

⁴² Gary A. Donaldson, *America at War Since 1945: Politics and Diplomacy in Korea, Vietnam, and the Gulf War* (Westport, CN: Praeger, 1996), 48.

MIG fighter aircraft, in addition to 224 Chinese MIGs reminded Mao that he also faced limits on the material resources that the Soviet Union provided.⁴³

The peace talks consumed nearly two years' time in part because, at that stage of the war, both sides had lost more men than those for which their plans had originally allowed. The Chinese Commander, who insisted on the title, "Commander of the Chinese Volunteers," adopted a defensive strategy for the ground war following the failed offensive in 1951 in the hopes that the Americans would lose the stomach for war and withdraw from the Korean peninsula. Mao Zedong had calculated a significant role for casualties to play in the war from the beginning. He estimated that 50,000 casualties would drive the Americans from Korea. Later, he revised that estimate to 100,000, but his armed forces had lost exorbitant numbers of men in early 1951 to epidemics and the unsuccessful Chinese offensive that the Americans termed the May Massacre of 1951.⁴⁴

As matters stood in the summer of 1951, an estimated 700,000 Chinese and North Korean troops faced a combined UN force of 500,000, but the effective American artillery and air power more than evened the odds. The Communist leaders realized that they could not conquer the entire Korean peninsula by force of arms. Therefore, the Chinese representatives at the peace talks attempted to score propaganda points by accusing the UN of violating the laws of war. Time at first appeared to favor the Communists, who walked out of the peace talks for dramatic propagandistic effect in October 1951, but a series of successful UN operations drove them back to the table a few months later. For the final year of negotiations, the Chinese sought principally to

⁴³ Alan J. Levine. *Stalin's Last War: Korea and the Approach to World War III*. Jefferson, NC: McFarland, 2005, pp. 282-283

⁴⁴ Michael H. Hunt "Beijing and the Korean Crisis, June 1950-June 1951." *Political Science Quarterly*, Vol. 107 No. 3 (Autumn, 1992), pp. 467-468

save face.⁴⁵ The death of Stalin and a decline in the Chinese economy – non-hostile factors of a different sort than usually considered – contributed materially to the Chinese decision to end their stalling tactics and come to terms in 1953. The threat of the new American 280mm nuclear cannon might have persuaded them as well.⁴⁶

On the American side, Ridgway's strategy of minimizing casualties bore fruit. American losses in the first year of the war, June 1950-June 1951, exceeded the combined losses of the final two years of the war, July 1951-July 1953.⁴⁷ Desiring minimal casualties, General Ridgway rejected a series of plans by the 8th Army Commander, General James Van Fleet, calling for bold offensives. Instead, the UN forces gradually took small parcels of ground and held them while peace negotiations proceeded. Simultaneously, Ridgway allowed a more aggressive air campaign on North Korea directed at their civilian infrastructure in addition to military targets. In a scene foreshadowing the military politics of the Vietnam War, political considerations --- namely the fear of direct Soviet involvement --- caused President Truman to place the airfields and bases of supply in Manchuria off limits for bombing.⁴⁸ Once the high command had furnished the best battlefield strategy they could manage under the direction of President Truman, the President depended on the degree of indulgence the public would show for a long war. Truman found that the public lacked the tolerance for a long war and his political opponents exploited his weakness. Former General Eisenhower campaigned successfully in 1952 with promises to end the Korean War.

⁴⁵ Matthew B. Ridgway, *The Korean War: How We Met the Challenge, How All-out Asian War was Averted: Why MacArthur was Dismissed, Why Today's War Objectives must be Limited* (Garden City, NY: Doubleday, 1967), 111.

⁴⁶ D. M. Giangrecco, "Artillery in Korea: Massing Fires and Reinventing the Wheel," in *Korean War Anthology*, (Fort Leavenworth, KS: U.S. Army Command and General Staff College, 2003), 16.

⁴⁷ Dean Acheson, *The Korean War* (New York: Norton, 1971), 129.

⁴⁸ Conrad C. Crane, "Raiding the Beggar's Pantry: The Search for Airpower Strategy in the Korean War," *The Journal of Military History* 63 (October 1999): 912, 915.

Public support for the Korean War experienced a number of specific fluctuations based on the events happening overseas. The zeal that prompted swift action from the UN after the North Koreans invaded across the 38th Parallel likewise motivated the American public. On June 27, 1950, the *New York Times* printed an Associated Press (AP) compilation of editorials from newspapers throughout the United States. Of 17 editorials printed, 14 blamed Soviet influences for the Korean War and only one called the conflict a “civil war” between the Korean people. The Honolulu *Star-Bulletin* recommended the use of nuclear weapons against the North Koreans and two major newspapers compared Stalin’s Communism to Hitler’s Nazism. The Portland *Oregonian* invoked a hypothesis akin to the “domino theory” of the Vietnam era and the Milwaukee *Journal* mentioned the appeasement of Munich by name.⁴⁹ Judging from the presses of the United States, the editors and publishers at least did not lack determination for victory at the outset of the Korean War.

Two days before the invasion, the *New York Times* had published a story on the front page, “Soviet Uses ‘Liberation’ Bait in Americas to win Foothold,” warning of attempts by the Soviets to exert influence in South America.⁵⁰ The warnings about the threat that Communism posed to the free world seemed to come to life as the public saw pictures and heard stories of the North Koreans’ invasion. In the early stages of the war, which President Truman termed a “police action,” the American public accepted the idea of American troops protecting the borders of the free world, which the United Nations had guaranteed. Both the need to make good the reputation of the United States and a

⁴⁹ Associated Press, “Comments by Press of Nation on Korean Situation,” *New York Times*, 27 June 1950, A10 (L).

⁵⁰ Will Lissner, “Soviet Uses ‘Liberation’ Bait in Americas to Win Foothold,” *New York Times*, 23 June 1950, A1 (L).

desire to protect the freedom of the people of South Korea motivated overwhelming support for the war in its early stages. The American news media assisted in the war effort in part by failing to report the aggressive steps Syngman Rhee had taken to remain in power. The South Korean leader essentially ruled as a dictator and repressed his political opponents. Public ignorance of his machinations aided the Truman administration's efforts to maintain public support for the war effort.⁵¹

All of the conditions of the war changed abruptly, however, when Chinese troops swarmed across the Yalu River to attack the Americans in late 1950. It became clear at that moment that the war would prove neither militarily easy nor short in duration nor inexpensive in casualties. As the American public began counting the costs in men, the growing time the Korea War consumed, and the lack of major strategic achievements of the operation; support for the effort declined. Early in October 1950, reporters wrote enthusiastic stories of MacArthur's brilliant victory in Korea and exulted in his call on the North Korean People Army to surrender. The entire free world had won a victory against Communism, the print media proclaimed.⁵² China's entrance caused a significant decrease in the popularity of the Korean War, as Americans faced the prospect of a global war against Communism, for which they had not prepared. Given the heightened stakes, an increasing number of people considered the cause of self-determination for South Korea one not worth the risk of a large-scale war with China or the Soviet Union. As the people of America confronted the situation, most important was the fact that the Second World War had ended less than a decade earlier. The public desired a return to normalcy and a time of rest from the emotional and financial hardships of war.

⁵¹ Gary A. Donaldson, *America at War Since 1945: Politics and Diplomacy in Korea, Vietnam, and the Gulf War* (Westport, CN: Praeger, 1996), 27.

⁵² Foster Hailey, "Europe is Reassured by Victory in Korea," *New York Times*, 1 October 1950, E3 (L).

A series of newspaper surveys measured the public support for the Korean War over time. As is always the case with opinion polls, the wording of the questions affected the attitudes of the responders. When the questions cited casualties, approval numbers declined, especially as the numbers mounted. Survey questions that mentioned halting aggression by Communists, garnered higher support for the war effort. In a pattern that would foreshadow the Vietnam situation, however, the public did not react either way to the suffering of the Koreans. Saving South Koreans from their suffering condition at the hands of North Koreans did not influence the public to support the Korean War in greater numbers.

The trends in public support followed an event-based pattern with baseline numbers on both sides. All other things being equal, a certain percentage of the public will oppose any war and a certain percentage will support any war, providing a baseline of roughly 20% at each end.⁵³ Rather than a gradual decline as time and casualty numbers increased, support for the war suffered a drastic blow when the Chinese entered the fray, but stabilized later. Support for the Vietnam War followed a similar pattern years later. The Korean War ended in a stalemate with very few territorial gains to speak of and a total of 157,000 casualties, including wounded, on the American side. The estimated two million casualties on the Communist side did not make a difference in the perceptions of the public. The lack of decisive victory and the extremely tedious deliberations at the peace table hurt President Truman's popularity, persuaded him not to

⁵³ John E. Mueller, "Trends in Popular Support for the Wars in Korea and Vietnam," *The American Political Science Review* 65 (June 1971), 359, 362.

seek a second full term, and provided fodder for criticism by Presidential campaigns by candidates from both parties in 1952.⁵⁴

The publishers who had celebrated President Truman as “The Little Man who Dared,” in April 1951, turned against the war within less than one year. *Time* magazine expressed the desire for fewer casualties and troop level reductions in January 1952. An article explained that the most sensible course of action would be for the Truman administration to withdraw the majority of American troops and to threaten a retaliatory attack against China. Plainly, the *Time* staff saw no good reason for American soldiers to continue dying on the ground in Korea. Two months later, *Time* introduced Truman’s primary challenger, pro-peace Democrat Estes Kefauver, proclaiming, “The Rise of Senator Legend.”⁵⁵ On the Republican side, Senator Robert Taft attacked the Truman administration for waging an endless war in Korea and promised, “Liberty, Peace, Solvency.” The editors agreed with Taft. Where the publishers had seen victory one year and a half earlier, *Time* saw only disaster in June 1952, declaring, “a more enduring fact: the Korean War, long in a mess, is falling into a worse mess day by day.”⁵⁶ Truman decided not to seek reelection and General Dwight Eisenhower exploited the weakness of the Democrat Party to regain the White House for the Republican Party for the first time in 20 years.⁵⁷

The final year of the Korean War brought one specific inconvenience from which the public desired relief. Civilian medical spokesmen complained that the draft of doctors was taking a toll on civilian hospitals and facilities, prompting a strong

⁵⁴ Burton I. Kaufman, *The Korean Conflict* (Westport, CN: Greenwood Press, 1999), 15.

⁵⁵ “The Rise of Senator Legend,” *Time*, 24 March 1952, 20-22.

“The New Plan for Korea,” *Time*, 14 January 1952, 17.

⁵⁶ “Pursuit of Disaster,” *Time*, 23 June 1952, 15.

⁵⁷ “Liberty, Peace, Solvency,” *Time*, 9 June 1952, 19-20.

movement in Congress to return doctors home early. As Dean Acheson documented, casualties of the first year exceeded the combined casualties of the two final years. Presumably, doctors should have become available as hostilities continued at a reduced operations tempo. News reports in the spring months of 1953 celebrated advances in the negotiations at the peace table that would culminate a few months later with the cease fire. Upon receipt of the first encouraging reports, civilian medical personnel began petitioning Congress for early return dates for doctors and, if possible, an end to the doctors' draft. Congress exerted pressure on the Armed Forces to bring doctors home early, and the Secretary of Defense responded with a change in policy in May, 1953. The Armed Forces would thenceforth be allowed three doctors for every 1,000 troops, which reduced the strength of both of the major branches of service. The Army rate had been 3.5 per 1,000 so the adjustment would be minor. Naval vessels maintained a 4 to 1,000 ratio of doctors to troops, so their personnel cuts would reach a rate of 25%.⁵⁸

The overall effect of non-hostile casualties on the public and the reaction of the public to non-hostile losses remained minimal throughout the war. Casualty reports did not include mention of fratricide; instead they simply distinguished between losses in battle and non-battle events. The decline in the number of casualties for the final two years of the war assisted materially in the Armed Forces High Command's effort to maintain public support for the war. As far as support was concerned, the public reacted to the time consumed and the scope of the conflict more than to the number of casualties. The petitions against the doctors' draft probably represented the only major episode in which the public actively attempted to influence policy in the realm of non-hostile

⁵⁸ Albert E. Cowdrey, *The Medics' War: United States Army in the Korean War, Volume 4*, (Washington, DC: U.S. Government Printing Office, 1985), 337, 358.

casualties – and these petitions concerned only treatment and did not come in reaction to deaths.

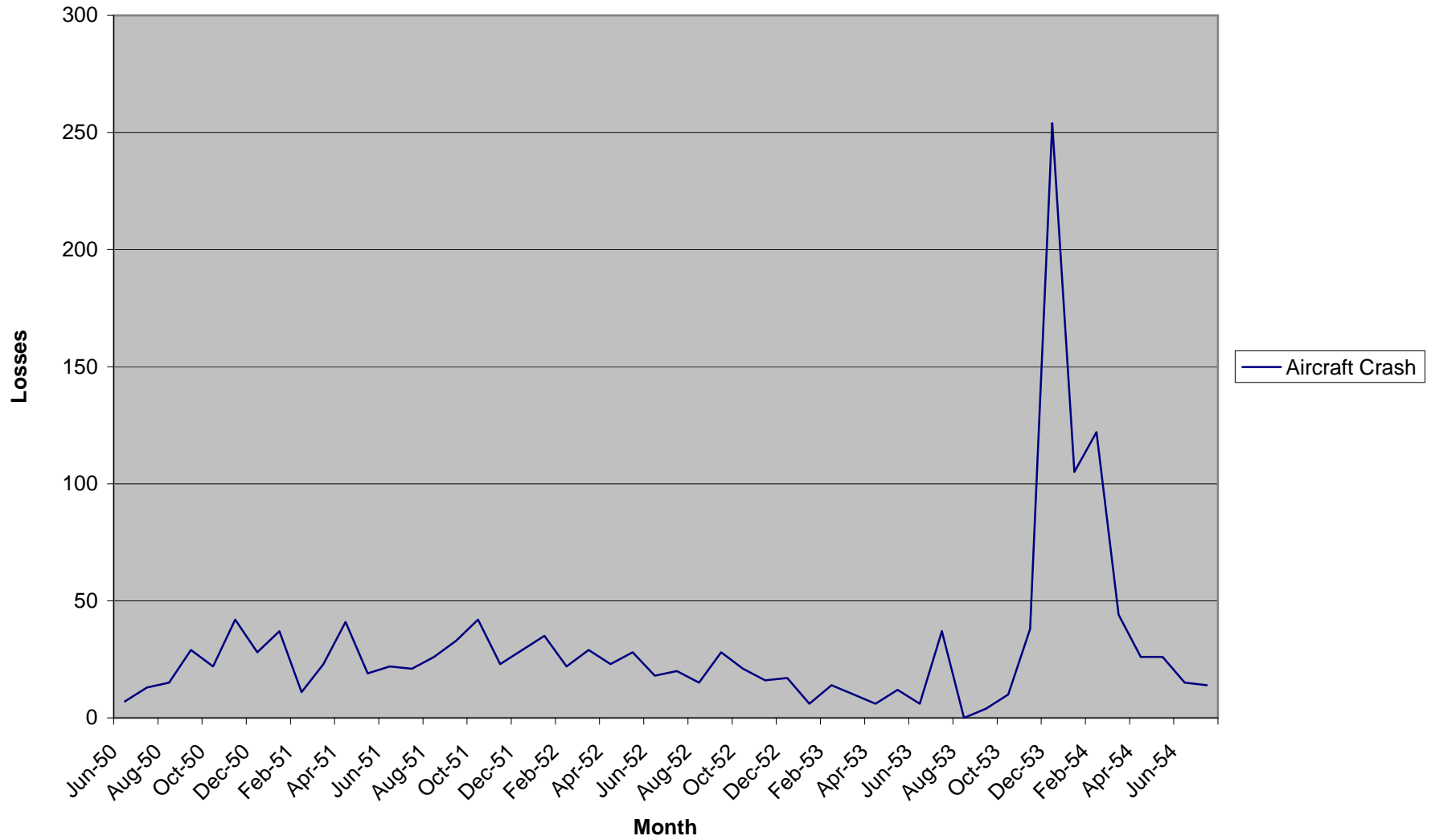
The Korean War taught the Armed Forces several lessons that military personnel implemented in future conflicts. The Armed Forces adopted the systems of preventive medicine and air medical evacuation that the Army Medical Corps developed in Korea. By increasing the availability of vaccinations and air evacuation assets in future wars, the Medical Corps put the lessons of Korea to practice on a full scale. The pitfalls of Close Air Support in Korea led to the systems of marking and communications that soldiers on the ground have employed in Vietnam, Iraq and every other theatre of modern war. Finally, the Korean War identified to Generals and politicians the need for obtainable political and military goals. The politicians and Generals have dealt with conflicts over command issues and disagreements over objectives in every one of “these kinds of wars.”

Table 2.1 shows the aircraft losses by month in Korea, along with the very few vehicle accidents noted by the National Archives. This chart reflects when the U.S. military officially reported the casualties, so many appear later than they actually happened. "Misc." refers to months before June 1950 and after July 1954.

Table 2.1: US AIRCRAFT LOSSES IN KOREA			
Month	Vehicle Accident	Aircraft Crash	Other
Jun-50		7	
Jul-50		13	
Aug-50		15	
Sep-50		29	
Oct-50		22	
Nov-50		42	
Dec-50		28	
Jan-51		37	
Feb-51		11	
Mar-51		23	
Apr-51		41	
May-51		19	
Jun-51		22	1
Jul-51		21	
Aug-51		26	
Sep-51		33	
Oct-51		42	
Nov-51		23	
Dec-51		29	
Jan-52		35	
Feb-52		22	
Mar-52	2	29	
Apr-52		23	
May-52		28	
Jun-52		18	
Jul-52		20	
Aug-52		15	
Sep-52		28	
Oct-52		21	
Nov-52		16	
Dec-52		17	
Jan-53		6	
Feb-53		14	
Mar-53		10	1

Apr-53		6	
May-53		12	
Jun-53		6	
Jul-53		37	
Aug-53		0	
Sep-53		4	
Oct-53		10	
Nov-53		38	
Dec-53		254	
Jan-54		105	
Feb-54		122	
Mar-54		44	
Apr-54		26	
May-54		26	
Jun-54		15	
Jul-54		14	
Misc		17	
Total	2	1521	2

Chart 2.1: U.S. Aircraft Losses in Korea Trends
Chart based on the raw data of Table 2.1



CHAPTER 3: THE VIETNAM WAR

NON-HOSTILE CASUALTIES IN “THESE KINDS OF WARS” FROM THE KOREAN WAR TO OPERATION IRAQI FREEDOM

A little girl counted pedals as she tore them one by one from a daisy in a black-and-white television ad. When she reached the number “ten,” the camera zoomed into a close shot of her face as she looked up to the sound of a voice counting down from “ten” to “zero.” Suddenly, a nuclear explosion filled the screen and the viewer heard the warning of what would happen if Barry Goldwater became President. The narrator’s words were indistinct at times, but the dramatic visual image achieved the desired effect. Republican Senator and presidential candidate Goldwater had stated that a war of Communist aggression raged in Vietnam and that the American government should deepen its involvement in the war. In the hands of President Lyndon B. Johnson, the senator’s statement became an overture to nuclear war, as Goldwater received the indelible brand of “warmonger.” So lasting was this cowboy and warmonger image that seven years later, a satirical deck of political cards depicted Goldwater riding a nuclear missile after the fashion of Slim Pickens in “Dr. Strangelove.” If the decisively slanted election results of 1964 gave any indication of the public’s opinion of fighting a war in Vietnam, the people of America stood squarely against it. Soon after the 1964 election, Republicans began telling the grim joke, “They warned me that if I voted for Goldwater we would escalate the war. I voted for Goldwater and, sure enough, we did escalate the war.”

President Kennedy had inherited from the Eisenhower administration in 1961 a situation with eight hundred advisors on the ground in Vietnam. Kennedy

increased the total number ten fold in the two years before his death. Johnson doubled that number again to sixteen thousand before the end of the 1964 presidential campaign and increased the number to twenty-three thousand by the middle of 1965. Although he spoke of restraint, avoided precise statements of policy, and never requested a formal declaration of war from Congress, Johnson had assigned to the United States Armed Forces an ever-increasing share of the responsibility for the survival of the regime in South Vietnam.¹ President Lyndon Johnson feared the political defeat his party would sustain if he “lost” Vietnam to Communism the same way that the Truman administration had “lost” China in 1949. The images that the Korean War had created for the American public about Cold War policy all plagued Johnson: the domino theory, the Munich analogy, the 1946 elections that had brought a Republican majority in Congress after the loss of China.²

President Johnson, Defense Secretary Robert S. McNamara, and General William C. Westmoreland presided over the critical period of American involvement in the Vietnam War from the first major escalations of troop numbers in 1965 to the turning point of the war with the Tet Offensive of 1968. By the time the Nixon administration and General Creighton Abrams had replaced the original architects of the war, the American news media and both major political parties had already resolved that the United States should withdraw from Vietnam. Nixon presided over the gradual withdrawal of American troops as his administration attempted, ultimately

¹ H. R. McMaster, *Dereliction of Duty: Lyndon Johnson, Robert McNamara, the Joint Chiefs of Staff, and the Lies that led to Vietnam* (New York: Harper-Collins Publishers, 1997), 92.

² Gary A. Donaldson, *America at War Since 1945: Politics and Diplomacy in Korea, Vietnam, and the Gulf War* (Westport, CN: Praeger, 1996), 102-103.

unsuccessfully, to accelerate the transfer of authority for South Vietnam to the Army of the Republic of Vietnam (ARVN).

The commanders at the highest levels of the American military structure viewed the war in Vietnam as a limited campaign reminiscent of the latter stages of the Korean War. Both the American interests at stake in and commitment to the war occupied a position of limited importance. The American public and the civilian political leaders who ordered and in some cases, directed military action therefore tolerated minimal friendly casualties and pursued limited objectives. Political concerns and fear of Chinese or Soviet intervention prevented serious consideration of a conventional invasion of North Vietnam or Laos or Cambodia for the first several years of the war.³

The military commanders had reconciled themselves for the most part to the Cold War as an era in which they did not pursue the surrender of the enemy as a manifest objective in wars. Instead, they expected to fight several small attrition conflicts to maintain a fragile status quo of territorial spheres of influence between the United States and the Soviet Union. Some of the most respected leaders of the previous two wars published literature at the time that elaborated this new military attitude. General Maxwell Taylor, a decorated veteran of World War II, had penned *The Uncertain Trumpet*, in which he explained the strategies of counterinsurgency in lieu of large conventional commitments of troops.⁴ Taylor championed flexible and varied responses to aggression rather than the massive retaliation strategy that the Eisenhower Administration had adopted. Taylor's work so impressed President John F. Kennedy that he used it to craft the early stages of the American advisers' campaign in Vietnam.

³ H. R. McMaster, *Dereliction of Duty: Lyndon Johnson, Robert McNamara, the Joint Chiefs of Staff, and the Lies that led to Vietnam* (New York: Harper-Collins Publishers, 1997), 268.

⁴ *Ibid.*, 158.

Kennedy promoted the new elite Special Forces, the fabled Green Berets, in response to the principles Taylor espoused in *The Uncertain Trumpet*.

Adding to the dialogue, General Matthew Ridgway's book about the Korean War even contained in its subtitle the strong insistence on limited strategy. The sub-title of Ridgway's book, *The Korean War: How We Met the Challenge, How All-Out Asian War was Averted: Why MacArthur was Dismissed, Why Today's War Objectives Must be Limited*, revealed a number of his conclusions on the nature of war at that time. Full-scale war would bring a nuclear apocalypse or a protracted meat-grinder experience akin to the First World War. In Korea, President Truman's policy against the use of nuclear weapons had prevented the former and General Ridgway's tactic of incremental advance had prevented the latter. Ridgway stated emphatically that his campaign of incremental advance geared toward minimizing friendly casualties should serve as a blueprint for future war objectives.⁵ The generals of the post-Second World War era resigned themselves to campaigns like those of the Korean War, in which they pursued the objectives of minimal friendly casualties, low material losses, maximum enemy casualties, and fighting for as short a time as possible.

The books by Generals Taylor and Ridgway and Secretary McNamara's theories of casualty analysis influenced American policy enormously. All casualties, friendly and enemy, influenced the civilian leaders in Washington as they decided what steps to take in escalating or de-escalating the American forces in Vietnam. Across the battle lines, General Vo Nguyen Giap, the commander of the People's Army of Vietnam (PAVN), pursued the strategy of guerrilla warfare followed by parity with his enemies, followed by

⁵ Matthew B. Ridgway, *The Korean War: How We Met the Challenge, How All-out Asian War was Averted: Why MacArthur was Dismissed, Why Today's War Objectives Must Be Limited* (Garden City, NY: Doubleday, 1967), 239.

a massive conventional invasion. Throughout the war, the government in Hanoi directed the NLF operations in the South skillfully, while championing the NLF as freedom fighters waging a war of national liberation from the United States.⁶

Although the terminology of the war of attrition in Vietnam resembled that of the Korean War, the realities on the ground revealed a number of key strategic and tactical differences between the two. Both caused massive civilian deaths and domestic displacements, but the Korean civilians enjoyed the benefits of a clearly defined front line area, unlike their counterparts in Vietnam. The Korean terrain enabled the American forces to establish battle lines running the width of the Korean peninsula, with the ocean protecting their vital flanks. In devastating contrast, Vietnam's proximity to Laos and Cambodia prevented the Americans from strictly isolating the territory they sought to defend. The North Vietnamese exploited the American respect for national borders by running a steady logistical stream of traffic through Laos and Cambodia on a series of routes, roads and trails that came to be known as the Ho Chi Minh Trail. For the last two years of the war in Korea, the majority of the fighting transpired north of the 38th Parallel in formerly enemy territory, where the Americans chose the places and stakes of each battle. By contrast, nearly all of the ground fighting in the Vietnam War happened in South Vietnam, with the Americans trying to defend unfamiliar terrain against a people who had lived among jungles and rice paddies all of their lives. Unforgiving terrain and lack of strategic initiative took an enormous toll on the American Armed Forces in Vietnam.

⁶ Denis Warner, *Certain Victory: How Hanoi Won the War* (Kansas City: Sheed Andrews and McMeel Inc., 1978), 113-116.

Another major difference between the situations in Korea and Vietnam included the presence of a guerrilla force native to South Vietnam. The National Liberation Front, (NLF) or Viet Cong as the Americans called them, fought for control of South Vietnam in close concert with the North Vietnamese Army, officially called the People's Army of Vietnam (PAVN), throughout the period of the war. Striking by night and from ambush, the NLF rendered the domestic situation in South Vietnam a volatile and dangerous one for the American soldiers in all areas of the country. Unlike the Chinese troops who had fought most of the Korean War after the North Korean retreat of 1950, the PAVN and NLF forces considered their war one of national liberation from foreign colonizers. The Americans had essentially assumed responsibility for the erstwhile French colony and supported non-Communist leaders in South Vietnam who governed as military dictators. The territorial gains by the UN forces in Korea had driven the Chinese to the peace table in October 1951 and a subsequent decline in the Chinese economy prompted the final effort for cease fire terms in 1953.

Unlike the Chinese, who fought as surrogates for the North Koreans, their "little brothers" in North Korea, the PAVN and NLF soldiers fought to reunify their own country and homeland. In each case, Asian soldiers, aided by military materiel support from the Soviet Union, fought to expel foreigners from their land, but the Vietnamese showed greater determination. For reasons of pride, history, and emotional fervor against foreign colonizers, the North Vietnamese soldiers and their leaders, both civilian and military, determined that they would win the war, expel the Americans, and conquer South Vietnam regardless of the costs in men and material. Ultimately, the North

Vietnamese strategy for fighting the war made their casualties irrelevant, whereas the American strategy made casualty numbers essential.

Robert McNamara, who served as Secretary of Defense for the Kennedy administration and most of the Johnson administration, had built his theories of military strategy around the number of casualties that each side could inflict. McNamara agreed with Presidents Kennedy and Johnson that nuclear weapons had changed the nature of war and created a need for the flexible response systems that General Taylor proposed. By McNamara's reckoning, the gradual increase of American efforts should force the North Vietnamese gradually to decrease their military incursions into Vietnam as casualties mounted. Casualties would also dissuade the NLF by measurable degrees from fighting against the U.S.-backed government of South Vietnam. By monitoring the introduction of American troops carefully, McNamara hoped to calculate precisely how many friendly troops he should commit to eliminate a precise number of enemy troops. If his theory were accurate, McNamara could develop the perfect equation for a strategy of escalation.⁷

Actually, the North Vietnamese committed troops to the war in direct, rather than inverse, proportion to the efforts of the United States. Amidst the famous body counts by which the Americans sought to establish exactly how many of the enemy they killed, the People's Army of Vietnam and the NLF did not allow their casualties to demoralize them or deter them from waging the battle. McNamara's incorrect calculation of the nature of the war in Vietnam contributed to the failure of the American cause, but his obsession with casualty numbers resulted in a relatively accurate and precise record of American

⁷ H. R. McMaster, *Dereliction of Duty: Lyndon Johnson, Robert McNamara, the Joint Chiefs of Staff, and the Lies that led to Vietnam* (New York: Harper-Collins Publishers, 1997), 162-164.

losses, both hostile and non-hostile. The National Archives and Records Administration database, “War/International Relations: The Vietnam War,” housing these records, supplied specific information, including the dates and precise manner of death. Unlike the Korean War, in which the National Archives recorded only aircraft crashes, the database of Vietnam War non-hostile casualties differentiated among various causes, including vehicle accidents, illnesses, and aircraft crashes, thus enabling a researcher to assess the non-hostile casualties of the American war effort in very precise numbers. The strategy of the conventional clash in Korea required few records of non-hostile deaths, but casualties played a much larger role in Vietnam.⁸

Under the McNamara strategy, the secretary counted non-hostile casualties from accidents, aircraft crashes, and illnesses as part of the natural attrition that accompanied the deployment of American forces overseas. When calculating the proper equations for escalation, then, McNamara planned to consider the number of Americans committed to the war effort, the number of enemy soldiers they were able to kill and the amount of enemy war materiel they destroyed within a given length of time. Against these numbers he hoped to calculate the costs in military equipment and lives, both those lost to enemy fire and to non-hostile causes. As a result of McNamara’s emphasis on the numbers of casualties, the Department of Defense kept unusually accurate records on the manner of death of the American soldiers in Vietnam. So accurate were its methods of tracking personnel that when the Armed Forces decided to inter one unknown Vietnam casualty in the Tomb of the Unknown Soldier at Arlington Cemetery, the Armed Forces made the

⁸ National Archives and Records Administration, “War/International Relations: the Vietnam War,” *Access to Archival Databases*, available from <http://aad.archives.gov/aad/display-partial-records.jsp>; Internet, accessed 12 September 2007.

decision by default. Only one set of American remains confounded the efforts of the Armed Forces mortuary units in their identification attempts.⁹

The Department of Defense (DOD) produced a complete report on casualties for the entire war, reflecting 10,700 deaths from non-hostile causes and 47,322 from hostile causes. The DOD database supplements the National Archives (NA) database in several areas. The National Archives database did not include casualty numbers from murders, drowning, accidental homicide or weapons accidents, which accounts for the discrepancy of approximately 3,000 lives. There are, however, other discrepancies between the two sources. Strangely, the National Archives reported more deaths from aircraft crashes than did the DOD records, including hostile and non-hostile causes. The same trend affected the National Archives numbers regarding illnesses. Some National Archives database entries listed both “illness” and “other accident” as the cause of death, and the final tally of accidents proved greater in the DOD records by several hundred. Apparently, the casualties to whom the National Archives gave a mixed designation of “accident” and “illness,” the DOD classified as accident deaths.

The NA database compilation statistics reflect American losses over time, whereas the DOD documents merely record final statistics. The NA numbers reflect expected trends: very low numbers of casualties from the late 1950s through the early 1960s. During the three-month period from November 1963 through January 1964, non-hostile casualties eclipsed ten for the first time, with nine reported killed in aircraft crashes. The non-hostile losses exceeded one hundred first in the May-July quarter of 1965, just after the Marines came ashore in Da Nang, the first large wave of ground troops, in March.

⁹ Edward F. Murphy, *Vietnam Medal of Honor Heroes* (New York: Ballantine Books, 1987), 260-262.

The numbers of aircraft crash deaths experienced more erratic number variances owing to the smaller number of crashes and the ability for one crash of a large aircraft to affect the total count for the quarter. On August 24, 1965, for example, 52 American servicemen all died in aircraft crashes at sea. Statistically, only one in eight servicemen who died in an aircraft crash perished at sea. The evidence appears strong that one transport aircraft en route to Vietnam crashed at sea, killing 52 personnel. The total of 87 aircraft crash losses for August through October 1965 exceeded those of the following two quarters and nearly doubled the losses of the immediately previous quarter. The following quarter also featured a very large crash, leading to a total aircraft loss figure of 77. Thereafter, the crash numbers for the February-April 1966 quarter returned briefly to a lower number of losses, 47, comparable to May-July 1965. As American combat operations accelerated in the middle of 1966, including massive numbers of aerial missions, the aircraft loss figures exceeded 100 for the first time in May-July 1966 and never fell below 90 in a quarter from November 1966 until May-July 1971. Non-hostile aircraft losses in the NA compilation exceeded 200 twice. The first such instance occurred in November 1967-January 1968, while the second occurred in August-October 1969, the quarter in which all American non-hostile casualties peaked. The Nixon administration policies of Vietnamization and gradual withdrawal caused the aircraft crash numbers to fall below 100 for the summer quarter of 1971, and they never increased over the 100 milestone again.¹⁰

The NA database statistics for illness and accident fatalities closely mirror the numbers of American troops in Vietnam. The illness statistics reveal a steady increase

¹⁰ National Archives and Records Administration. "War/International Relations: the Vietnam War," *Access to Archival Databases*, available from <http://aad.archives.gov/aad/display-partial-records.jsp>; Internet, accessed 12 September 2007.

during the early escalation of the war, punctuated by fourteen straight quarters of losses above 50, peaking with five straight quarters above 70 in 1968-1969. Compared to the aircraft crashes, the vehicle accident and illness numbers held to a steady course with few peaks and troughs. Vehicle accident losses experienced trends similar to those of illnesses, with one other noteworthy trend. The vehicle accident losses tended to peak in the spring and summer quarters, February-April and May-July, likely reflecting a greater number of missions during those relatively dry months. In every year of large American ground operations, a period running from May 1965 to April 1972, either the February-April or the May-July quarter proved the most costly in vehicle accident deaths. Illness and accidental death rates responded immediately to the withdrawals of troops and began sharp declines earlier than did aircraft crash deaths. By the beginning of 1972, the combined death tolls for illnesses and vehicle crashes had fallen below 40, whereas only two quarters earlier each rate had exceeded 40 deaths.

The Americans suffered their highest non-hostile casualties in the late months of 1969 due to the large number of troops involved in missions in Vietnam after the Tet Offensive and before the Nixon Administration began major withdrawals. The aircraft crash numbers and other non-hostile casualties maintained relatively steady declines throughout the withdrawal of 150,000 troops from March 1970 to March 1971. During the next year, an additional 100,000 American troops departed the Vietnam theatre, and the declining non-hostile losses reflected the smaller number of troops.¹¹ Total non-hostile losses in the NA compilation numbers fell below 300 in the August-October 1970 quarter, dipped below 200 in May-July 1971, and declined below 100 in February-April

¹¹ Gary A. Donaldson, *America at War Since 1945: Politics and Diplomacy in Korea, Vietnam, and the Gulf War* (Westport, CN: Praeger, 1996), 124-126.

1972. After each milestone in decline, the numbers recorded in the National Archives database never returned to the heights of previous levels.¹²

The DOD casualty documents offer a more comprehensive database of overall casualty losses than do the numbers from the NA. The ground combat service branches experienced trends in non-hostile deaths that differed markedly from those of the Air Force, Navy, and Coast Guard. The Coast Guard made a statistically insignificant impression in Vietnam, losing a grand total of seven men, two to “other accidents,” and five to hostile fire. Other trends that appeared among the various branches reflected the environmental, physical, and psychological toll that Vietnam service could take on the soldiers as individuals. In a few cases, the disposition of non-hostile casualties followed the proportions of personnel in theatre for each branch, but many times the nature of the missions proved a better predictor of death rates than the number of troops that the branch had in theatre.

The environment to which the troops’ duties exposed them took a toll in the types of sicknesses that the various branches reported. Of the 117 American servicemen who died of malaria, all but two served in the Army or Marine Corps, conducting missions on foot in wet jungle terrain. Naturally, the Navy and Marine Corps lost the greatest number of men to aircraft crashes at sea; over three fourths belonged to their branches. The Air Force lost by far the fewest men to drowning; its 24 losses barely one eighth the 167 of its nearest competitor, the Marine Corps. The Air Force also lost twice as many men to heart attacks as did the Navy and Marine Corps despite a smaller number of men in Vietnam than these two branches. This figure most likely reflects the particular stresses

¹² National Archives and Records Administration. “War/International Relations: the Vietnam War,” *Access to Archival Databases*, available from <http://aad.archives.gov/aad/display-partial-records.jsp>; Internet, accessed 12 September 2007.

that flights in high-performance aircraft place on the human body. The sheer number of Army soldiers in Vietnam caused nearly all casualty tolls to skew toward the Army by a large margin. The frequent use of transport by both fixed and rotary wing aircraft led to an Army death toll from non-hostile aircraft crashes on land of 2,234. This figure tripled the combined losses of all other branches. The vehicle losses in the Army nearly mimicked this slanted proportion, as 864 deaths out of a total of 1104 belonged to the Army.¹³

Dr. John A. Parrish, who practiced medicine for the Marine Corps for one year in Vietnam, which included the Tet Offensive of 1968, wrote about a few Marines in the infantry who developed serious psychological problems and grew homicidal. Some suffered trauma from fear of enemy attacks at night. Others had seen too many of their friends tortured, killed, and sometimes beheaded by the NLF or PAVN soldiers. One episode involved a Marine acquitted of murder after he killed an unarmed fellow Marine with his firearm in a bar fight.¹⁴ The casualty numbers for homicide and suicide quantified the trends that Dr. Parrish described. During the course of the war, while no Navy personnel of any rank committed suicide, five airmen took their own lives. The Marine Corps lost 23 men to suicide, while the Army lost a staggering 354. Intentional homicide rates revealed similar trends, as the Army lost 199, the Marine Corps 22, the Air Force five, and the Navy four. The casualty statistics for accidental homicide and ordnance accidents also placed the Army and Marine Corps disproportionately far above their fellow branches. Aside from aircraft losses at sea, the Navy topped the casualty lists

¹³ Department of Defense *U.S. Casualties in Southeast Asia* (Washington, DC: Washington Headquarters Services Directorate for Information Operations and Reports, 1985), 5.

¹⁴ John A. Parrish, *12, 20 & 5: A Doctor's Year in Vietnam* (New York: E. P. Dutton and Company, 1972), 138, 303, 317.

in only one area; “other causes,” which included 154 deaths out of 258 for the entire Armed Forces. Most likely, the fire that one Navy pilot reported on board the *USS Oriskany* fit into this category. Two aircraft workers had been playing with flares and managed to blow up the entire flare locker, in the process killing 44 sailors.¹⁵ Overall, the environmental and mission conditions exerted a devastating effect on the Army and Marine Corps troops in Vietnam that extended far beyond the immediate dangers of the battlefield.

The experience of the Korean War had revealed close air support to be a significant fratricidal risk. Air-to-ground fire caused the majority of fratricide losses in Korea, but the introduction of more sophisticated Forward Air Controller (FAC) systems significantly reduced incidents of air-to-ground fratricide. The Department of Defense produced extensive records of every American casualty, arranged according to several demographics, but did not include fratricide among the causes of death. As had been the case in Korea and would be the case again in Operation Iraqi Freedom, record keepers mixed fratricidal deaths into the categories of enemy fire, intentional homicide, and accidental homicide. As was the case with the casualties in Korea and later conflicts, the figures on fratricide prove to be more episodic and anecdotal than specific and definitive. The stories of combat in Vietnam detail extensive interactions between ground forces and the awesome firepower of artillery and attack aircraft, but tales of fratricide remain surprisingly uncommon. In the area of close air support, the Air Force and Army in Vietnam appeared to have improved their accuracy in response to the lessons of the last war.

¹⁵ John D. Sherwood, *Afterburner: Naval Aviators and the Vietnam War* (New York: New York University Press, 2004), 98.

The basic strategy ground units employed in Vietnam required very precise coordination with their various supporting elements of both air power and artillery. As soon as the infantry units came under fire, they established as strong a defensive posture as they could manage and called for support, either from artillery in fire support bases (FSBs) or from attack aircraft. Typically, the infantry marked their own positions with smoke and used radio to describe exactly where the enemy units had taken cover.¹⁶ The Air Force typically sent FACs in unarmed single-engine Cessna “Bird Dogs” to mark the targets for Huey or Cobra attack helicopters or the AC-47s, nicknamed “Puff the Magic Dragon” because of the numerous deadly and multiple types of rounds they could fire into the enemy. The propeller-driven airborne FACs fired smoke rockets into the areas where ground units had reported enemy contact as markers for the napalm, mini-guns, or rockets that the attack aircraft carried.¹⁷

The tactic of standoff held the key to preventing fratricide in this kind of engagement. As long as the American ground forces kept a safe distance from the North Vietnamese and NLF forces and marked their friendly areas effectively, the aircraft providing support could target the enemy accurately and safely. On the other side of the battle lines, the PAVN and NLF soldiers attempted to overrun the U.S. and ARVN positions and fight at close quarters to eliminate standoff as a factor. A comparison of the battles for Hill 823 and Lang Vei clearly illustrated this principle. Even in the absence of FACs, the American soldiers holding Hill 823 marked their own positions with smoke grenades and directed the aircraft above them to pummel all of the landscape

¹⁶ Robert J. Graham, “Vietnam: An Infantryman’s View of Our Failure,” *Military Affairs* 48 (July 1984): 134.

¹⁷ Cash, John, John Albright and Allan Sandstrum. *Seven Firefights in Vietnam*. (Washington, DC: Office of the Chief of Military History, 1985), 106.

around them with ordnance. The fire from friendly artillery wounded two Americans, but the aircraft completely defeated the PAVN attack and avoided inflicting any fatal losses on friendly troops. When the PAVN forces attacked Lang Vei during the Tet Offensive, by contrast, they closed with the Marines so quickly that the Marines were not able to call for air support until the PAVN troops had nearly overrun them. This outpost near Khe Sanh fell in one all-night fight, so that the surviving defenders called for air support to destroy everything in the camp as they attempted to escape out of the base. Air strikes wounded two Americans at Lang Vei, where a failure to maintain standoff resulted in poor air support and an American defeat.¹⁸

In the most dangerous areas, such as the skies over the Ho Chi Minh Trail in Laos, the Air Force employed F-100 Super Sabres as “fast FACs,” instead of propeller craft, to mark convoys of trucks, supply and anti-aircraft sites, and hostile vehicles for the Air Force F-4s and F-105s to bomb. On these missions, they faced a negligible risk of fratricide because there were few friendly units involved on the ground. The only fratricide reports from Laos involved an outpost of Laotian and Thai troops who received support from the CIA at Skyline Ridge. Because the 1962 Geneva Agreement had forbidden foreign troops from operating in Laos, the Americans withdrew their six hundred sixty advisers; however, the North Vietnamese completely ignored the terms of the agreement. The CIA retained a small number of clandestine operatives in Laos, and the United States gave funding and air support from aircraft based in Thailand to the Thai and Laotian troops. During the battle for Skyline Ridge in 1971-1972, when the Pathet Lao and PAVN forces attempted to overrun a Thai, Hmong, and Lao defensive position, American aircraft provided cover. One errant pilot dropped a bomb directly on the CIA

¹⁸ Ibid., 106, 128.

compound in Long Tieng, one of the bases on Skyline Ridge, and killed one Hmong inside the base. Overall, the CIA lost only eight operatives over a ten-year campaign in Laos, four to hostile fire and four in aircraft crashes.¹⁹

For the last four wars, air-to-ground fire has been the most likely to result in fratricide, but the toll the close air support missions took in Korea dwarfed the American losses in Vietnam. In addition to the bombing that took one Hmong life in Laos, accounts of the battles for the Ia Drang Valley, Mount Ap Bia, Hill 875, a patrol skirmish near Dong Ha and the defense of Lang Vei produced six anecdotal stories of air-to-ground fratricide. An attack helicopter unit near Dong Ha once mistook a squad of Marines for enemy troops and wiped out nine Americans.²⁰ The worst instance of air-to-ground fratricide involved one errant Air Force pilot, who dropped a 500-pound bomb on the top of Hill 875, which the 173rd Airborne Brigade had already occupied. The bomb killed thirty infantrymen; yet this was a far cry from the fratricide incidents in Korea that at times inflicted body counts in the hundreds.²¹

The commander of the units tasked with taking Mount Ap Bia reduced his calls for air support after one air strike killed two of his soldiers. The reaction of Lieutenant Colonel Hal Moore in the Ia Drang Valley after a misplaced napalm canister killed two Americans was more typical, however. Moore immediately radioed the pilots of the F-100s that had killed his men and told them to forget about their unfortunate miss. As his troops fought for their lives in a desperate defensive struggle, he wanted the tempo of air support kept as high as it had been. Like the Marine commander at the Pusan perimeter

¹⁹ William M. Leary, "The CIA and the 'Secret War' in Laos: The Battle for Skyline Ridge, 1971-1972," *The Journal of Military History* 59 (July 1995): 506, 509, 517.

²⁰ John A. Parrish, *12, 20 & 5: A Doctor's Year in Vietnam* (New York: E. P. Dutton and Company, 1972), 289.

²¹ Edward F. Murphy, *Vietnam Medal of Honor Heroes* (New York: Ballantine Books, 1987), 101.

in South Korea who insisted on artillery support despite fears of fratricide, Moore recognized that close air support saved more lives with its high tempo of fire than it cost on the rare occasions when a pilot missed his target.²²

Two reports of artillery fratricide yielded inconclusive numbers, the former on Hill 823 wounding two and killing none. In the second instance, a number of personnel sensors near the Cambodian border reported movement, and an intelligence analyst at a Special Forces camp attempted to ascertain whether any friendly elements occupied the area. When all reports returned in the negative, he called on his nearest fire support base to fire on the suspected infiltrators of the border. Sadly, the personnel whom he targeted were Cambodians with an American adviser. They had embarked on a secret mission, possibly with the CIA, that excluded the Special Forces intelligence sources from authorized knowledge.²³ The precise numbers of friendly troops killed in this episode were not reported, but the toll was light. Overall, the close air support system had improved so thoroughly since the Korean War that this type of fratricide became a rare phenomenon.

Perhaps the most infamous form of fratricide that gained fame in Vietnam was the act of “fragging.” In the familiar scenario, enlisted infantrymen used fragmentation grenades to kill officers to whose judgment they did not want to entrust their lives. Although he was not a victim of fragging, Lieutenant Henry T. Herrick of the 1st Battalion 7th Cavalry under LTC Hal Moore typified the potential fragging victim. When Moore mentioned Herrick as a possible leader for the scout platoon to his Command

²² Moore, Harold G. and Joseph L. Galloway, *We Were Soldiers Once...And Young* (New York: Harper-Collins Publishers, 1992), 210-212.

²³ Kit Lavell, *Flying Black Ponies: The Navy's Close Air Support Squadron in VN* (Annapolis, MD: Naval Institute Press, 2000), 66.

Sergeant Major, the non-commissioned officer (NCO), a seasoned veteran of World War II and Korea, responded immediately, “Colonel, if you put Lieutenant Herrick in there, he will get them all killed.”²⁴ During the Battle of the Ia Drang Valley, Herrick did indeed make a costly error that got many of his platoon members killed, including himself, so no soldier took action against him.

All of the soldiers in Vietnam knew that their missions would consume a set length of time before they went home, regardless of whether they performed well. They prioritized, therefore, in favor of keeping themselves alive. Officers who would endanger their lives through reckless risks or bad judgment they might see fit to dispatch. The Department of Defense reported 600 fragging episodes between 1969 and 1971. Eighty-two officers died in these fragging incidents and 652 more suffered wounds.²⁵ Judging from the disproportionately large suicide and homicide numbers among soldiers and Marines, the circumstances of the war certainly took a considerable toll on the ground troops who faced the enemy every day of their tours.

A final area of fratricide concerned air-to-air combat. Over the course of the war, American aircraft shot down 25 friendly craft by mistake, 7 belonging to the Air Force, 2 to the Marines, and 16 Navy. Judging from the total numbers of aircraft that each branch lost, the Navy committed much more than its share of air-to-air fratricide, due in part to the difficulty of killing MIGs in Vietnam. The North Vietnamese MIG 17s and 21s only appeared for dogfights when they believed the odds to be strongly in their favor.

Consequently, the Air Force and the Navy each crowned only one ace during the war.

²⁴ Moore, Harold G. and Joseph L. Galloway, *We Were Soldiers Once...And Young* (New York: Harper-Collins Publishers, 1992), 90.

²⁵ Estes Thompson. “Fragging is Rare in Afghanistan and Iraq.” *Associated Press*, 17 October 2007, available at http://www.newsvine.com/_news/2007/10/17/1031645-fragging-is-rare-in-iraq-afghanistan; Internet; accessed 18 October 2007.

Some F-4 and F-8 pilots flew for their entire tour in Vietnam without seeing a single MIG.

Naturally, a number of pilots grew overly eager, and some squadron commanders adopted unsafe policies as a result. Although pilot training courses had always taught the pilots to make a positive identification of suspected enemy aircraft before opening fire, some squadron commanders disputed the need for identification. If the long-range radar installations which directed the American aircraft identified another airplane as a hostile, they reasoned, perhaps identification was not truly necessary. The zeal for a MIG kill and the accompanying Silver Star medal likely influenced their policies. In one instance recorded by a Radar Intercept Officer on an F-4, a pilot fired four AIM-9 Sidewinder missiles at a friendly aircraft because he had not attempted to make a positive identification. Mercifully, the Sidewinders all malfunctioned, which saved two lives and two careers.²⁶ All things considered, faulty weapons may have saved the Navy many such tragedies.

While pilots and infantrymen learned the human consequences of the war in Southeast Asia firsthand, the Generals in Washington viewed the situation from a more detached perspective. Equipped with a strategy that amounted to killing as many of the enemy as possible while losing few friendly troops, officers at every level implemented policies designed to minimize casualties and bolster their soldiers' morale. A survey of over 100 general officers who commanded the American forces in Vietnam conducted in 1974 revealed the soldiers' perceptions. Of those who responded to the survey, seventy percent complained that the civilian officials did not make the military objectives of the

²⁶ John D. Sherwood, *Afterburner: Naval Aviators and the Vietnam War*(New York: New York University Press, 2004), 81, 84.

United States Armed Forces clear enough for effective execution on the ground. Only eight percent reported clear objectives. A majority of those surveyed, sixty percent, reported that they believed reports from the field inflated the body counts of enemy dead by some degree on a regular basis. A minuscule two percent speculated that the body counts might have underestimated the number of enemy dead.²⁷ Beyond doubt, the great majority of officers charged with prosecuting the war experienced frustration with the lack of clarity in their objectives.

Robert Graham, an infantryman in the 4th Infantry Division confirmed the rumored “search and evade” missions that his unit performed throughout the year he spent in Vietnam from 1968 to 1969. In a typical day, the company performed search and destroy missions all day and assigned each platoon to set ambushes all night. Instead of setting ambushes, the platoons found the safest available place where they could defend in case of enemy attack and kept only a few men awake throughout the night. In the morning, almost without exception, the platoons returned to their company assembly areas and reported no enemy contact. Staff officers at the battalion level had selected the sites for ambush from maps of areas where they had never set foot and never would go in person. From the sleeping “ambushes,” company commanders received credit for multiple missions during the night and thereby padded their resumes. The phenomenon of overestimated body counts that the Generals cited assumed a predictable role in the game that officers played in Vietnam. Like the night ambushes that accomplished nothing except to give officers mission reports to send up the chain of command, inflated body counts provided metaphorical feathers in the caps of officers, and the higher chain

²⁷ Douglas Kinnard, “Vietnam Reconsidered: An Attitudinal Survey of U.S. Army General Officers,” *The Public Opinion Quarterly* 39 (Winter 1975-1976): 449-451, 453.

of command would never know the difference between an actual kill and one made up for dramatic effect. As seventy percent of the Generals attested, they had no incentives from Washington to do better.²⁸

The war from the air assumed a similar nature to that of the ground war, in which the pilots and their commanders sought to give positive reports of kills and missions whether or not they had accomplished any meaningful goals. In the course of the bombing campaign along the Ho Chi Minh Trail in Laos, the bomber pilots sometimes reported “destroyed” the same truck or ground asset in multiple missions. Worse yet, some dropped their bombs from high altitudes without confirming whether or not they had hit their targets. The FACs developed a name for pilots who made only half-hearted efforts at bombing accurately, calling them “nose-dippers.” After missing his target completely, but not endangering his own life or aircraft, the “nose-dipper” pilot headed for home and reported the target destroyed or the bombing mission results inconclusive. By the standards of some squadrons, such a mission succeeded because it gave the pilot a combat mission, minimized friendly casualties, and credited his commander with another mission to report to his higher chain of command. The guidance from commanders became commonplace, “no target in Vietnam was worth the loss of an airplane or pilot.”²⁹ Soldiers and pilots resolved to complete their time in country and go home intact.

The Armed Forces had expressed strong concerns over minimizing casualties and expenditures in training. The emphasis on safety and economy of training resources

²⁸ Robert J. Graham, “Vietnam: An Infantryman’s View of Our Failure,” *Military Affairs* 48 (July 1984): 138.

²⁹ Newman, Rick, and John Shepperd. *Bury us Upside Down: The Misty Pilots and the Secret Battle for the Ho Chi Minh Trail*. (New York: Ballantine Books, 2006), 149-151.

contributed to the losses that the Air Force suffered in air-to-air combat over Vietnam. The masterminds who wrote the combat doctrine for the F-4 pilots envisioned a long-range war of launching missiles at the Soviet-built MIGs that lacked weapons with comparable range. The F-4 pilots learned bombing as well as missile combat procedures on the mistaken assumption that missiles had made old-fashioned dog-fighting tactics obsolete. Throughout the training period, the chain of command stressed safety and minimal accidents, at times preferring safety over realistic training.

The F-4 Phantom's design compounded the problem of safety because, when maneuvered wrongly, the Phantom showed a tendency to go out of control, called "departing" in Air Force jargon. Rather than teaching the pilots how to determine angles and safe speeds, the training unit commanders forbade turns over certain speeds during air-to-air training sorties. This policy sacrificed the element of realistic training in the name of maintaining pilot and aircraft safety. Unfortunately, the problem of insufficient preparation through unrealistic training enabled the commanders of the pilot training units to amass favorable records by minimizing their installations' accidents and injuries. The training units reported no multi-million dollar aircraft lost in plane crashes and no serious injuries to the pilots who had trained on their bases. The mission of minimizing non-hostile casualties had taken precedence over the mission of preparing the fighter pilots for combat.

After an abysmal record in air-to-air combat, the Air Force improved its training beginning in 1972. After the additional dog-fight practice, the Air Force managed to improve its F-4 kill ratio in the closing months of the war to nearer a 3:1 ratio. Ironically, the aerobatic skills that the pilots developed from the additional dog-fight training also

reduced the number of non-hostile aircraft lost in crashes. Thus, the Air Force learned the hard lesson that the safest training in the long run is tough but realistic training.³⁰ For all of the branches of the Armed Forces, training bases and installations emphasized tough but realistic training in the years following the war in Vietnam.

Throughout American history, almost every previous war had ended when the losing side surrendered, usually after the winning side captured a key city or piece of terrain or defeated the losing side's army. In Korea, the original objective of the war had included the usual criteria for victory. The U.S. and U.N. troops fought to free South Korea from the hold of North Korea and afterwards to conquer North Korea as far as the Yalu River. The entrance of Chinese forces into the war caused President Truman and General Ridgway to change their strategy from one of territorial conquest to one of attrition. Although the Korean War ended on relatively favorable terms for the United States, the public discontent with mounting casualties had caused a significant decline in the popularity of the Truman Administration. For several strategic and tactical reasons, the U.S. effort in Vietnam faced a similar but steeper decline in popularity as a result of the conflict's long duration and the casualties that the American Armed Forces suffered.

President Johnson believed that a strategy of attrition could achieve the same stalemate in Vietnam that the U.N. forces had preserved in Korea and thereby halt the expansion of Communism in Southeast Asia. Therefore, he prescribed a strategy of attrition upon his commitment of large numbers of U.S. troops to South Vietnam in 1965. General Westmoreland established a three-phase strategy of first securing South Vietnam militarily, defeating the National Liberation Front (NLF) and People's Army of Vietnam (PAVN) forces in large areas, and finally driving the NLF and PAVN from South

³⁰ Ibid., 94, 99.

Vietnam entirely. All three phases of his plan, however, involved holding terrain that the Americans and their ARVN allies theoretically already controlled. The citizen at home watching the war on his television news or reading of military clashes in the newspaper could not observe major benchmarks of American success. During the Korean War, in the two final years of attrition combat, Ridgway's Army had followed an offensive strategy of taking enemy territory north of the 38th Parallel at places newspaper reporters nicknamed Bloody Ridge and Heartbreak Ridge. No such news of territorial gains reached the United States during the Vietnam War because the Americans fought the entire war on a defensive footing.³¹

General Westmoreland had learned the lesson from Korea that American forces could win a war of attrition, but the Korean War had begun with victory through territorial gain as its goal and the President and his generals had only adopted an attrition strategy after the Chinese invasion. For one of the only times in American history, President Johnson, Secretary McNamara, and General Westmoreland attempted to persuade the American people to accept a war of attrition for which they could only achieve victory by maintaining the status quo. The key handicap that the architects of the war faced was the pervasive presence of casualties in the minds of the American public, who perceived American lives buying South Vietnamese freedom from Communism. News reports carried nightly updates on each American aircraft which the North Vietnamese managed to shoot down, so that the losses of pilots remained foremost in the minds of Americans. Just as the public had not expressed support for a war in Korea to rescue the South Koreans, it showed little concern for the South Vietnamese people in

³¹ Carter Malkasian, "Towards a Better Understanding of Attrition: the Korean and Vietnam Wars," *The Journal of Military History* 68 (July 2004): 933.

response to poll questions. Even a hypothetical best-case scenario resolution of the Vietnam War offered few points on which the American people could applaud a gallant effort in a war worth fighting.³²

Two other major public perceptions of casualties in Vietnam divided the American soldiers along race and class lines. For a number of reasons, a disproportionate number of black soldiers became casualties in Vietnam during the early years of the war, a trend a number of Civil Rights leaders decried. Having desegregated under President Truman, the Armed Forces at the beginning of the war offered relatively equal opportunities for young men of all racial categories. A young man with only a high school education could rise to high non-commissioned officer rank, particularly in combat units. Consequently, early in the war, a greater than proportional number of black soldiers died in Vietnam just as the Civil Rights Movement was beginning to gain a following in the United States. Dr. Martin Luther King, Jr. called attention to the inequities of casualty numbers, which contributed to a decline in approval for the war among African-Americans.³³ The Armed Forces corrected the inequities of casualties, and by war's end, had managed to reduce the share of African-American casualties to 12.5% overall, which coincided approximately with the proportions of American society.³⁴

The second public perception about casualty patterns that reduced the support of the American people for the war held that soldiers from lower classes died in

³² John E. Mueller, "Trends in Popular Support for the Wars in Korea and Vietnam," *The American Political Science Review* 65 (June 1971): 375.

³³ Gartner, Scott S. and Gary M. Segura, "Race, Casualties, and Opinion in the Vietnam War," *The Journal of Politics* 62 (February 2000): 120.

³⁴ Department of Defense *U.S. Casualties in Southeast Asia* (Washington, DC: Washington Headquarters Services Directorate for Information Operations and Reports, 1985), 10.

disproportionate numbers. One study in 1992 examined the evidence of the “victims of a class war” paradigm and found that a number of affluent areas actually lost a slightly greater percentage of their sons in Vietnam than the national average. Measuring affluence by the median income of a given municipality, the study found only a small disparity between the affluent and low-income groups taken as a whole. Conventional wisdom would have predicted a much larger difference in the toll along class lines. The highly visible nature of draft deferments for college students contributed along with anecdotal evidence to the perception that almost no wealthy young men died in Vietnam. The members of the public mistook the erroneous perception for reality, and the Vietnam War now stands in collective memory as a race and class war when it scarcely deserves either label.³⁵

During the Korean War, popular support decreased sharply when the Chinese forces entered the fray in 1950. A similar plummet in support accompanied the aftermath of the Tet Offensive of 1968. Although the massive NLF and PAVN attacks failed militarily, Tet delivered a crushing blow to the political morale of the Johnson administration and the American public. The sheer size of the offensive proved to the president that Secretary McNamara’s strategy of attrition through graduated pressure had failed to defeat the Communist forces fighting for control of South Vietnam. In his politically weakened condition, Johnson nearly lost the New Hampshire primary to the underdog Senator Eugene McCarthy, the leading voice at that time for complete and unconditional American withdrawal from the Vietnam War. Johnson decided to refrain

³⁵ Barnett, Arnold, Timothy Stanley, and Michael Shore, “America’s Vietnam Casualties: Victims of a Class War?” *Operations Research* 40 (September-October 1992): 858, 864.

from running for re-election shortly thereafter. The Tet Offensive thereby influenced the succession of the presidency.³⁶

General Westmoreland had expressed strongly optimistic opinions of the status of the war prior to the Tet Offensive, but afterward, he issued a request for one quarter of one million additional troops. The President, the American news media, led by Walter Cronkite's grim assessment of the outcome of the Tet Offensive, and the American people, who had begun to resent the military draft, would not permit further escalation of the war. In a number of cases, the news media actually exaggerated the strength of the Tet Offensive to influence President Johnson to withdraw the United States from the war. The stories covering the NLF attack on the American embassy in Saigon included several false stories of NLF fighters making their way into the building itself, when in actuality all had died in a firefight with the three Marine guards in the courtyard. One photographer for the AP reported bodies strewn in several rooms inside the building. He did not send any photographs of those bodies, however, because his story was not true.³⁷ The press stories hastened the American public's disenchantment with the Vietnam War, but the faulty strategies of Johnson, McNamara and Westmoreland had already positioned the United States and South Vietnam for failure. President Johnson had originally escalated the war in Vietnam in part to avoid the politically damaging appearance of weakness, but he ironically sustained serious political injury in his own party because he waged a war that ultimately made the United States appear weak.

³⁶ John E. Mueller, "Trends in Popular Support for the Wars in Korea and Vietnam," *The American Political Science Review* 65 (June 1971): 366, 369.

³⁷ Peter Braestrup, *The Big Story: How the American Press and Television Reported and Interpreted the Crisis of Tet 1968 in Vietnam and Washington* (Garden City, NY: Anchor Press/Doubleday, 1978), 84.

For a number of reasons, the public turned against the Vietnam War in numbers larger than had opposed the Korean War. As a general rule, the public will tolerate an attrition war fought overseas until the war has consumed more time or more personnel than it finds acceptable. The lack of perceivable progress that the United States had made in Vietnam hastened the onset of discontent. By the summer months of 1968, the war in Vietnam had consumed more time and nearly as many men while accomplishing less than had the Korean War. The higher casualty numbers and the draft had caused the Vietnam War to grow personally significant to the American people and fueled the anti-war movement that confronted the Democrat party during its convention in 1968. Anti-war protesters, including the newly active group Vietnam Veterans against the War (VVAW), invoked the total number of casualties in a march on Washington in 1969, carrying body bags and signs reading, “43,419,” the number of casualties to that date.

The costly battle for Mount Ap Bia, in which the 101st Airborne lost 70 men killed, coincided with the VVAW march and the June 27, 1969, issue of *Life* magazine. *Life* readers opened the magazine to view the faces of the 241 Americans who had been killed in one week in the Vietnam War, fueling the anti-war feelings of the populace.³⁸ The VVAW called for an end of hostilities in Vietnam, diplomatic negotiations, and a coalition government in Vietnam including NLF representatives. Along with Veterans for Peace, an organization of Second World War and Korean War veterans, the VVAW united war opponents across a broader political spectrum than had existed prior to 1969.

By 1972, the United States Armed Forces had ended the draft and begun withdrawing from Vietnam, so the membership of the VVAW dwindled. Even so, the VVAW continued its anti-war, pro-veteran work by highlighting two other non-hostile

³⁸ John Pimlott, *Vietnam: the Decisive Battles* (Edison, NJ: Chartwell Books, 2003), 137-139.

casualty areas: the poor conditions of Veterans Administration (VA) hospitals, and the slow bureaucracy that made VA disabilities difficult for veterans to obtain. In the late 1970s, the VVAW supported veterans who sought VA disability for exposure to the herbicide Agent Orange. The Veterans Administration had not cooperated very efficiently with the soldiers who sought disability, but the VVAW had been publicizing the effects of exposure to Agent Orange since the Winter Soldier Investigation in 1971. The public had heard little about the substance during the war, so the news of soldiers developing adverse reactions to a chemical herbicide that their own Armed Forces had used proved disconcerting.³⁹

Immediately upon his assumption of power, President Nixon began a program of “Vietnamization” to train and equip the ARVN troops to continue the fight for control of South Vietnam, but his administration recognized the necessity of eventual withdrawal. In steady increments, American soldiers left Vietnam after training the ARVN units tasked with replacing them. In the revealing survey of general officers taken in 1974, a small majority, fifty-three percent of the generals responded negatively to the question of whether the war had been worth the costs. In answer to another question, sixty-five percent of the generals expected the ARVN to succeed in defending South Vietnam. Therefore, although nearly two thirds of the generals believed that their mission had succeeded, a majority still held that the results of the war had not been worth the costs in manpower. American casualty numbers had exceeded acceptable limits even for the Generals who commanded troops in Vietnam.⁴⁰

³⁹ Ibid., 72, 183.

⁴⁰ Douglas Kinnard, “Vietnam Reconsidered: An Attitudinal Survey of U.S. Army General Officers,” *The Public Opinion Quarterly* 39 (Winter 1975-1976): 450, 453.

The disappointing end of the Vietnam War yielded a multitude of consequences that influenced U.S. policy for several decades. Public support for the Vietnam War eroded at a far greater pace and to a far greater degree than had support for the war in Korea, even before the casualty numbers of Vietnam had reached those of Korea. The American people did not, in the long run, approve a long war of attrition with no possibility for conventional victory. During the future campaigns in Nicaragua and El Salvador, the Reagan Administration, reflecting the influence of Vietnam, limited U.S. involvement to funding and arming one side of the conflict. As soon as Hezbollah terrorists in Lebanon inflicted casualties, the Reagan Administration withdrew the Marines from Lebanon. The invasions of Grenada in 1983, Panama in 1990, and Iraq in 1991 all managed low costs in casualties and very short deployments while avoiding the pitfalls of attrition-based warfare. In each case, American forces achieved a conventional victory by driving the Cuban troops out of Grenada, unseating the Noriega regime, and driving the Iraqi forces out of Kuwait.

The Armed Forces adopted the Powell Doctrine of employing overwhelming force, defining enemy and creating an exit strategy for many of the small campaigns of the 1980s and the early 1990s. Succeeding presidential administrations fought a number of campaigns by proxy and for the most part abstained from sending American troops into battle. Strategically, fifteen years after the fall of Saigon, the Armed forces appeared to have learned the lessons of Vietnam that foreign wars should only last a short time and cost few lives.⁴¹

⁴¹ Gary A. Donaldson, *America at War Since 1945: Politics and Diplomacy in Korea, Vietnam, and the Gulf War*, (Westport, CN: Praeger, 1996), 128-130.

Tactically, each of the Armed Forces prepared for the future wars with attention to training, doctrine, and equipment. The Army and Navy continued preparing for limited engagements like the campaign in Vietnam and never again relied entirely on nuclear weapons as the deterrent that would keep peace. The end of the Cold War in the 1980s yielded a number of American allies in Eastern Europe that would contribute to the future American campaigns. Both Poland and the Ukraine proved invaluable support during the campaigns in Afghanistan and Iraq in the early 21st Century. The Army adopted a number of improved weapons and continued its training programs emphasizing small units and training indigenous troops to fight for the United States' interests in proxy wars. Of all of the Armed Forces, the Air Force completed the most sweeping transformations.

Having lost 62 fighters in air-to-air combat, and with them several pilots who might have survived had they completed realistic training, the Air Force learned the hard lessons of Vietnam and improved its training program thereafter. To affect realistic training, the Air Force adopted the tactic of dissimilar opposing forces (OPFOR). Training during the Vietnam War had pitted F-4 pilots against one another in training sorties, both employing American tactics. To prepare its fighters for future missions against Soviet-built aircraft and Soviet-trained pilots, the Air Force established training units that would use Soviet-style tactics and aircraft designed specifically to resemble the Soviet-built MIGs. The realistic OPFOR training problem corrected, the Air Force moved on to doctrine and design challenges.⁴²

⁴² Craig C. Hannah, *Striving for Air Superiority* (College Station, TX: Texas A & M University Press, 2002), 102-104.

During the Vietnam War, the F-4 had proven an effective fighter to some extent, but the engineers had also designed the F-4 to carry bombs as a dual-purpose attack aircraft. Designed for two purposes, the F-4 had performed neither with outstanding success. The F-4 Phantom's tendency to "depart" under adverse aerobatic conditions the designers corrected with a computer for the new F-15 and F-14 fighters for the Air Force and the Navy. The computers would control the aircraft in order to prevent the pilot from steering into a turn of excessive G-force. The Air Force employed a final new improvement to fighter pilot training with the T-38, an aircraft designed to introduce pilots to the F-15 style of flying. The 200 hours of training a fighter pilot spent in the T-38 prior to setting foot in the F-15 paid dividends as the Air Force reduced its accident rate to historic lows. The F-100 Super Sabre had earned the greatest Vietnam-era reputation for accidents. The pilots, who gave the F-100 the nickname "Widow-maker," watched a film of a catastrophic F-100 crash as part of their introduction to the aircraft. After watching the warning film, some pilots turned in their wings immediately.⁴³ The F-15, by contrast, became the first aircraft in Air Force history to remain accident-free throughout its first five thousand hours of flight time. The improved design elements, the pre-fighter training in the T-38, and the realistic OPFOR training at Redland improved the safety of the pilots and their aircraft in training and in combat.

During Operation Desert Storm, the F-15 achieved a 34:0 kill ratio against the Iraqi pilots, but other countries' air forces were also flying the "Strike Eagle." In its history of air-to-air combat missions, the F-15, in the service of the U.S., Israel and Saudi

⁴³ Newman, Rick and John Shepperd, *Bury us Upside Down: The Misty Pilots and the Secret Battle for the Ho Chi Minh Trail* (New York: Ballantine Books, 2006), 20.

Arabia had as of 2002 amassed a kill ratio of 95:0.⁴⁴ The aircraft born from the disappointments and hard lessons of Vietnam restored the American Air Force to full air supremacy and simultaneously maintained a better safety record than her predecessors had enjoyed. In this scenario, the Generals managed to reduce hostile and non-hostile losses at the same time.

The major wars of the 1990s and early 2000s revealed the extent to which the American Armed Forces had improved to meet the challenges of future wars. Tactically, American forces had achieved near invincibility in the air and strong dominance on the ground. The campaign in 1991 to free Kuwait from the grasp of Iraqi forces succeeded in a short time period and maintained minimal casualties. In the first major action since the Vietnam War, the United States generally fought in a manner that the public would tolerate.

⁴⁴ Craig C. Hannah, *Striving for Air Superiority* (College Station, TX: Texas A & M University Press, 2002), 108, 111.

Table 3.1 shows the National Archives statistics divided quarterly by cause of death.

Table 3.1: Non-Hostile Casualties in Vietnam NA					
Month	Vehicle	Aircraft	Illness	Other Accident	Total
Aug-Oct 1957			1		1
Aug-Oct 1960			1		1
Nov 60-Jan 61					0
Feb-Apr 1961		1			1
May-Jul 1961	1				1
Aug-Oct 1961					0
Nov 61-Jan 62	1			1	2
Feb-Apr 1962		2	1		3
May-Jul 1962		2			2
Aug-Oct 1962		7			7
Nov 62-Jan 63	1	1	1		3
Feb-Apr 1963	1	4			5
May-Jul 1963		2	1		3
Aug-Oct 1963	1		4		5
Nov 63-Jan 64	2	9			11
Feb-Apr 1964	1	7	4		12
May-Jul 1964	3	2			5
Aug-Oct 1964	1	7			8
Nov 64-Jan 65		13	1		14

Feb-Apr 1965	2	6	5		13
May-Jul 1965	35	47	20		102
Aug-Oct 1965	18	87	18	5	128
Nov 65-Jan 66	23	77	27	4	131
Feb-Apr 1966	37	47	16		100
May-Jul 1966	52	116	35	4	207
Aug-Oct 1966	65	68	31	1	165
Nov 66-Jan 67	55	118	39	5	217
Feb-Apr 1967	72	130	38	10	250
May-Jul 1967	60	154	48	14	276
Aug-Oct 1967	69	165	53	9	296
Nov 67-Jan 68	89	205	50	14	358
Feb-Apr 1968	115	123	55	15	308
May-Jul 1968	126	94	77	22	319
Aug-Oct 1968	112	168	81	24	385
Nov 68-Jan 69	98	103	74	10	285
Feb-Apr 1969	133	133	77	13	356
May-Jul 1969	150	138	73	32	393
Aug-Oct 1969	86	214	69	29	398
Nov 69-Jan 70	130	117	62	27	336
Feb-Apr 1970	101	194	69	23	387
May-Jul 1970	111	145	56	24	336
Aug-Oct 1970	93	102	58	16	269

Nov 70-Jan 71	78	98	51	16	243
Feb-Apr 1971	78	107	33	11	229
May-Jul 1971	56	27	40	8	131
Aug-Oct 1971	35	64	40	4	143
Nov 71-Jan 72	15	68	28	5	116
Feb-Apr 1972	9	40	9		58
May-Jul 1972	15	58	8	3	84
Aug-Oct 1972	4	13	5	1	23
Nov 72-Jan 73	4	8	2	1	15
Feb-Apr 1973	1		1		2
May-Jul 1973	1	6	1		8
Aug-Oct 1973		6	1		7
Nov 73-Jan 74		6			6
Feb-Apr 1974					0
May-Jul 1974		2			2
Aug-Oct 1974		2			2
Nov 74-Jan 75		2			2
Feb-Apr 1975		7			7
May-Jul 1975		1			1
Aug-Oct 1975					0
Nov 75-Jan 76		1			1
Feb-Apr 1976		2			2
May-Jul 1976					0
Aug-Oct 1976					0
Nov 76-Jan 77					0
Feb-Apr 1977					0

May-Jul 1977		1			1
Aug-Oct 1977					0
Nov 77-Jan 78		1			1
Feb-Apr 1978		6			6
May-Jul 1978		4			4
Aug-Oct 1978		16			16
Nov 78-Jan 79		3			3
Feb-Apr 1979		5			5
May-Jul 1979		1			1
totals	2140	3363	1364	351	7218

Table 3.2 shows the DOD numbers for the entire war by cause of death. This roster includes a number of causes of death absent from the NA database, including drowning, weapon and ordnance accidents, murder, accidental homicide, and suicide.

Table 3.2: Non-Hostile Casualties in Vietnam DOD

Vehicle	Aircraft Cras	Illness	Drowning	Suicide	Burns	Acc. Hom	Other Acc	Weapon, Ordnance	Murder	Unknown	Other	Total
1104	3247	935	1020	382	147	943	1367	841	230	224	258	10698
	Malaria	117										
	Hepatitis	22										
	Heart Attack	270										
	Stroke	42										
	Other	484										

CHAPTER 4: OPERATION DESERT STORM
NON-HOSTILE CASUALTIES IN “THESE KINDS OF WARS” FROM THE
KOREAN WAR TO OPERATION IRAQI FREEDOM

In the wee hours of February 17, 1991, a Squadron Commander arrayed three AH-64 Apache helicopters to furnish close air support (CAS) to a ground unit. Having boasted that he would spill the first enemy blood, he took his place alongside two subordinate pilots in support of the 1st Battalion 41st Infantry of the 1st Infantry Division and received his instructions from the operations officer on the ground. The operations officer gave him his left and right limits of fire and his azimuth for the direction the task force would move during the mission. Ground elements had reported two Iraqi BMP armored personnel carriers due north of their Scout Platoon’s position. Rather than moving his focus from his right limit to the center of his sector, however, the Squadron Commander remained focused at his right limit. The chopper pilot, thinking he was looking straight ahead instead of at his right limit, picked up the heat signatures of two American Bradley armored personnel carriers and reported visual contact with the enemy elements. What he had seen was part of the Scout Platoon, which covered the flank of the battalion in an arc-shaped formation.

Attempting to confirm the sighting as enemy elements, the operations officer gave the estimated grid coordinates of the enemy vehicles to the pilot. The Apache pilot either misread the graphics on his computer screen or simply recited back to the ground officer the coordinates of the hostile elements and continued focusing on the Bradley vehicles, having neither checked his azimuth nor confirmed his place on the map. When the operations officer heard the correct grid location from the pilot, he granted clearance for

the Squadron Commander to open fire. Owing possibly to dust and the 30 mile-per-hour winds of that night, or to the hot exhaust of the Bradleys, the pilot could not establish positive identification on his thermal sight. Switching from 30mm cannon to Hellfire missile, he obtained a lock, but still proved unable to identify the suspected enemy vehicles. The doubt in his voice showed over the radio as he remarked, "I hope to God they aren't friendly," and fired the Hellfire, one of the most destructive air-to-ground missiles in existence, into an American Bradley Fighting Vehicle. Moments later, he fired a second Hellfire into the M113 armored personnel carrier beside the Bradley.¹

Incidents such as this tragic error caused the deaths of thirty-five American personnel during Operation Desert Storm. Friendly fire actually killed more Marines than did weapons in the hands of Iraqi troops during the war. The fateful Hellfire missiles that Lieutenant Colonel Ralph Hayles fired killed two American soldiers and wounded six, a death toll that in light of the destructive power of the Hellfire seemed miraculously low. Out of a total deployed force of 540,000, the United States lost fewer than three hundred total servicemen and women from all causes during Operations Desert Shield and Desert Storm.² As instances of fratricide and other casualties occurred, the Generals commanding the higher echelons of the U.S. Armed Forces made a number of assessments that led to decisions about how they would present the casualties to the public and the families of the deceased.

In every attrition war, each time a soldier sustains a mortal wound, the members of his chain of command from his squad leader to his Commander in Chief will need to

¹ Rick Atkinson, *Crusade: the Untold Story of the Persian Gulf War* (Boston, MA: Houghton Mifflin, 1993), 320.

² Scott O'Hara, "Operation Desert Storm: Military Presence Allied Forces," *Desert-Storm.com*, 2005, available from <http://www.desert-storm.com/War/nations.html>; Internet; accessed 8 March 2007.

explain to the powers above them the reasons behind the wound. While the President is not familiar with every individual incident, he and his press spokesmen will confront a growing figure – a number of casualties – which they will need to justify to the Congress in greater detail as it grows larger. The superior officers of every fatally wounded soldier will assess the reasons behind his death and adopt measures to reduce the risk of another such death. In response to non-hostile casualties, the Army Department of Training and Doctrine (TRADOC) will identify trends and produce literature geared toward redressing problems in the current system that permit accidents to happen. TRADOC will develop training and add the new pieces of literature to presentations that the officers will demonstrate to every soldier in the theatre.

The Armed Forces formed its policy for reporting the casualty information during and after Operation Desert Storm on the basis of drawing the least possible attention to the news that some of the troops were killed by friendly forces. This policy led to a degree of awareness among members of the news media and the general public that, at times, differed somewhat from the facts of the situations, in that the Armed Forces initially notified all families of soldiers killed in battle that their loved ones had died from enemy fire, even in cases when every level of command knew that the cause of death had been fire from friendly forces. Even after a number of incidents gained notoriety in the news media, the strategy of the Brass proved quite effective. The overall casualty toll was so low and the troops returned to American soil so promptly that few Americans concerned themselves with the human costs of the war.

When politicians, Generals and news reporters evaluated the Gulf War, the largest conventional deployment of American troops to that date since the Vietnam War, they

principally compared the performance of the U.S. Armed Forces with their expectations. The war as it transpired proved wrong a number of the predictions of Armed Forces officers and prompted drastically different post-war assessments. Prior to the war, the Army General's Staff expected a costly war, which might produce ten thousand total casualties, fifteen hundred of them fatalities.³ A number of Air Force commanders espoused a pre-war paradigm in direct contrast to this view, in which they predicted the ability of air power to destroy half of the Iraqi forces before the introduction of American ground units.⁴

The high command of the Armed Forces also eagerly welcomed the Gulf War as a testing ground for their weapons and maneuver capabilities. The scope of the aerial bombardment and the simultaneous ground maneuver of Corps-sized elements surpassed many of the operations that the Army had attempted even in the course of the Vietnam War. After fifteen years of living in the shadow of the pullout from Vietnam, the military commanders at all levels anticipated the opportunity to demonstrate their fighting abilities. The Generals also anticipated the showdown between Soviet-made equipment and the superlative weaponry that American forces could bring to bear. The Cold War had never seen a clash between large formations of Soviet T-72 tanks and the new American M1A1 Abrams tanks. Other new weapons included large numbers of air-launched precision-guided munitions and the debut of the Multiple-Launch Rocket System (MLRS), whose awesome bombardment powers would grow legendary. Many of the non-hostile casualties of the Gulf War occurred because of the malfunction of new

³ Michael R. Gordon, *The Generals' War: The Inside Story of the Conflict in the Gulf* (Boston, MA: Little and Brown 1995), 132.

⁴ Williamson, Murray, *Air War in the Persian Gulf* (Baltimore, MD: The Nautical and Aviation Publishing Company of America, 1995), 38.

equipment and the extremely proficient killing ability of the weapons at longer ranges than any weapons had before enjoyed in the combat environment.⁵

General Colin Powell, the Chairman of the Joint Chiefs of Staff, developed the strategy for post-Vietnam wars known as the Powell Doctrine. Emphasizing overwhelming force, clear and defined objectives, support from the public, and an exit strategy, Powell designed his strategy to correct each of the major pitfalls of the War in Vietnam. Generals who commanded troops in Vietnam had complained about inadequate forces, unclear objectives, and open-ended commitments to the South Vietnamese regime. The costs in American lives and the length of the deployment had prompted a significant percentage of the citizens of the United States to disapprove the war effort. If the campaign proceeded according to his plans, which he had briefed to the public and the Congress, Powell and his subordinate Generals would annihilate their enemies quickly, lose relatively few lives, and return the bulk of American forces to the States before the public had grown disenchanted with the war effort.⁶

A number of politicians, such as Senator Sam Nunn of Georgia, added a perspective more pessimistic than the predictions of the military. Nunn warned of a strong Iraqi Army hardened by the war with Iran and doubted President George H. W. Bush's prediction that the troop commitment would be brief in length of time. This paradigm prompted Nunn and a number of other politicians to view the Gulf War as a mistake and to predict that the American Armed Forces were doomed to failure or a

⁵ Department of Defense, *Conduct of the Persian Gulf War; Final Report to Congress* (Washington, DC: U.S. GPO 1992), 590.

⁶ Douglas Kinnard, "Vietnam Reconsidered: An Attitudinal Survey of U.S. Army General Officers," *The Public Opinion Quarterly* 39 (Winter 1975-1976): 449-451.

quagmire of protracted warfare similar to the Vietnam War.⁷ President Bush, in his addresses to the public, stressed the importance of halting Saddam Hussein's aggression and predicted, through his Central Command (CENTCOM) commander, General H. Norman Schwarzkopf, a commitment of six months with a few thousand casualties, far below those of Vietnam. Public opinion polls by *Time* and CNN taken in November of 1990 showed the American people agreeing more with the expectations of Nunn than Bush by a narrow margin, but still in favor of the war. After the successful operation in Panama, President Bush enjoyed generally positive public support in foreign policy. Its vote of confidence in the Gulf War effort could best be termed cautious, but willing to make a limited commitment of troops.⁸

In retrospect, historians view the Persian Gulf War principally as an exercise of American policy aimed at preserving a semblance of stability in the Middle East. Multiple American presidents had sought to maintain the current boundaries and regimes in most countries in the Middle East and adopted the secondary objective of opposing the most territorially acquisitive regimes. After the Iran-Iraq War in the 1980s, the United States resolved, as a matter of policy, to oppose the next strongman who attempted to acquire territory by force. Saddam chose to take over Kuwait and thereby prompted President George H. W. Bush to assemble a coalition of allies to oust him from his conquest. American interests for oil access played a part in the decision to drive Saddam out of Kuwait, in tandem with the policy of opposing the most troublesome regime in the

⁷ John Mueller, *Policy and Opinion in the Gulf War* (Chicago, IL: University of Chicago Press, 1994), 124.

⁸ *Ibid.*, 55, 304.

Middle East. President Bush stressed the importance of defeating Saddam, calling it the most important development in foreign affairs since World War II.⁹

After the clash of American troops with Iraqis, the dire predictions yielded to amazement at the power of American weapons systems. As the war turned into a rout, massive formations of American troops pushed the Iraqi Army out of Kuwait and reports of the so-called “Highway of Death” began arriving from news reporters. Criticism that the United States Armed Forces were killing more Iraqi troops than was absolutely necessary prompted the Bush Administration to halt the ground war after only one hundred hours. In addition to taking ground and inflicting casualties, the movements caused a number of accidents, especially near the boundaries between units, when the Americans made a large advance during the night. The Generals’ “testing ground” paradigm would point out that the American tanks annihilated the Iraqi T-72 tanks in the night environment, where the Iraqi tanks lacked night vision, but misidentifications of targets also caused fratricide incidents. Before another such deployment, TRADOC paid attention to developing new briefings to prevent fratricide, to emphasize armored vehicle recognition, and to request improved optics and navigation equipment.¹⁰ When accounting for the sources of American casualties, the interpretation of the Gulf War in terms of its massive troop movements and attempts to control such movements will necessarily play a prominent role.

For present purposes, the macro paradigm of the Gulf War will consider the operation as a campaign to weaken a tyrannical leader while restoring the territorial status quo in the Middle East and stabilizing the oil market, while at the same time bearing in

⁹ Ibid., 56.

¹⁰ Department of Defense, *Conduct of the Persian Gulf War; Final Report to Congress* (Washington, DC: U.S. GPO 1992), 597.

mind the micro paradigms of the war. The Gulf War was a successful weapons proving ground for the American Armed Forces, a massive deployment of troops across the desert, and a source of lessons learned about troop maneuvers and the controls necessary for the prevention of fratricide in the future.

To evaluate the causes and effects of non-hostile casualties in the Persian Gulf War, one must understand the desire to minimize the impact of fratricide, which influences the decisions of military leaders at every level. The Generals who planned the war to drive Saddam Hussein's forces out of Kuwait strove to minimize both the actual instances of friendly fire and the publicity that such instances generated in the public. The unusually low number of deaths from all causes aided this effort considerably. Public opinion polls published in *Policy and Opinion in the Gulf War* by John Moore showed the low tolerance that the public expressed for American casualties relative to previous wars. The Iraqi forces had neither killed American citizens, nor destroyed American property, nor invaded American soil, with the result that many respondents to polls expressed the desire that the United States end the war if casualty numbers mounted too rapidly. His work is quite illuminating in the way he casts the political situation and the consequences of the war for President Bush and Congress.

For military and political leaders, a minimal casualty image was imperative. True to this objective, General Schwarzkopf in his autobiography *It Doesn't Take a Hero* gave extremely short shrift to reports of friendly fire, except to mention his attempts to minimize it. Michael R. Gordon uses a similar perspective to that of General Schwarzkopf in *The Generals' War*, in which Gordon gives numerous examples of generals making strategic decisions based on the need to prevent friendly fire. An apt

companion to Gordon's work *Air War in the Persian Gulf* by Murray and Thompson gives the view of the war from the standpoint of the top brass of the American Air Force. Michael Lewis' article "The Law of Aerial Bombardment in the 1991 Gulf War" contributes a full analysis of the role the Judge Advocate General (JAG) officers played in approving and analyzing the legality of targets for air strikes. These secondary sources furnish excellent accounts of the war from the point of view of the high Military Brass.

A fitting counter to these positive reports is Rick Atkinson's *Crusade: The Untold Story of the Persian Gulf War*. Atkinson emphasizes the intensity and pain of warfare, highlighting the cases of friendly fire and the famously explosive temper displayed by the general known to the public as "Stormin' Norman." Atkinson draws attention to the Hellfire attack on an American Bradley Fighting Vehicle by Lieutenant Colonel Hayles. Hayles joined LTC John Daly as each bore the dubious distinction of holding the position of Battalion Commander and firing fatally on friendly troops. The case of LTC Daly's killing of Corporal Fielder prompted a Congressional investigation, as all evidence revealed a cover-up by military authorities. The Committee on Government Affairs report titled "The investigation of a friendly fire incident during the Persian Gulf War" and the General Accounting Office's, "Investigation of a U.S. Army Fratricide Incident" furnish excellent accounts of a worst-case scenario in a friendly fire incident. A second invaluable government compilation is *Conduct of the Persian Gulf War: Final Report to Congress*. The report devotes one appendix to friendly fire and provides a number of statistics that explain some of the conduct of the Army in the John Daly case. The Department of Defense website contained the document "The United States Navy in

‘Desert Shield’ / ‘Desert Storm,’” in which the Navy conducted a formal evaluation of its successes and lessons learned from the war with Iraq.

One of the most vivid sources of primary material on combat is Otto J. Lehrack’s collection of interviews, *America’s Battalion: Marines in the First Gulf War*. A Marine veteran of the Vietnam War, Lehrack interviewed the Marines from his old battalion, the 3rd Battalion, 3rd Marines, which fought the Battle for Kafji alongside Saudi troops. The 3/3 Marines experienced a number of close calls with friendly fire and lost eleven men to fratricide. An excellent contribution to attack helicopter fratricide by an expert in the field is James A. Towe’s Master’s thesis, “Eliminating Fratricide from Attack Helicopter Fires: An Aviator’s Perspective.” Towe provides the most comprehensive analysis in existence of the cases of fratricide from attack helicopters during the Gulf War. William Garrett recommends new doctrinal measures in his article “Fratricide: Doctrine’s Role in Reducing Friendly Fire,” and Henry Larsen adds “Fratricide: Reducing the Friction through Technology.” These theses illuminate the causes of fratricide and recommend solutions at the practical level of ordinary troops.

In reaction to two servicemen’s deaths from a Connecticut National Guard Unit, Senator Christopher Dodd and Representative Christopher Shays requested a General Accounting Office investigation into the causes of accidents with unexploded ordnance. The GAO produced the report “Casualties Caused by Improper Handling of U.S. Submunitions,” examining the explosives carried by the artillery pieces of the Armed Forces. The report discovered that the famous MLRS weapons system had caused a number of the casualties due to a parts malfunction. The Army had known about the

problem a few years in advance, but had not corrected the defect fully because of the expense of new systems.

A few macro-level articles also deserve attention. Bennett, Leggold and Unger wrote “Burden-Sharing and the Persian Gulf War” to examine the motives of the nations involved in the Coalition and to speculate on the chances for future alliances. In addition, a number of online databases, “1991 Defense Almanac,” *Gulf War Debriefing Book*, and Desert Storm.com furnish stories and specific accounts of the deaths of American soldiers. For comparison purposes with Operation Iraqi Freedom in 2003, the statistics at icasualties.org stand second to none. By means of these sources, an observer can evaluate what the levels of casualties truly were and whether they compared favorably or otherwise with other sources.

The Persian Gulf War draws ready comparison with the Spanish-American War for a number of reasons, including duration, cost in manpower, and apparent ease of battle. The “splendid little war” to drive Iraqi forces out of Kuwait generally taxed the Americans very little emotionally and left the commanders of all services at every level satisfied with the outcome. The war proved so short and low in casualties that the Army could scrutinize every instance of reported fratricide during combat operations and render judgment. The basic numbers are so low that the various sources reporting on Operation Desert Storm agree on the numbers with few exceptions.

The United States Armed Forces lost 148 soldiers in battle, including 35 from fratricide, a rate of 25 percent, and 145 to non-battle causes such as traffic accidents, illnesses, and aircraft crashes.¹¹ In its final report to Congress, the Armed Forces

¹¹ Rick Atkinson, *Crusade: the Untold Story of the Persian Gulf War* (Boston, MA: Houghton Mifflin, 1993), 315.

identified by name all of the service personnel who died during the campaign to free Kuwait from Iraqi control.¹² The Iraqi losses, by comparison, seemed astronomical. As General Schwarzkopf confidently touted the over 60,000 prisoners that American forces had taken in his post-ceasefire negotiations with the Iraqi generals, even his estimate understated the number by over ten thousand.

The Department of Defense reported enemy losses at over one hundred aircraft, over three thousand tanks, two thousand artillery pieces, two thousand other armored vehicles, and nineteen ships sunk, with seventy-one thousand total Iraqi prisoners of war turned over to the Saudi government.¹³ Iraqi deaths at the hands of American forces would prove more difficult to calculate, but they certainly numbered in the thousands and reflected several Iraqi divisions rendered entirely ineffective for additional combat. By almost any standard, then, the overall assessment of the casualties in the Gulf War showed American casualties quite low and Iraqi casualties amazingly high. The twenty-five percent share that fratricide claimed in battlefield deaths might be attributed to Iraqi ineptitude as much as to American eagerness to fire on ill-identified targets.

Although Saddam Hussein promised “the mother of all battles,” his bluster quickly evaporated as the Allies commenced an overwhelming assault.¹⁴ The American air campaign took the desired toll on the morale of the Iraqi Armed Forces, destroying significant elements of their combat power and establishing complete air supremacy. By the time the ground campaign began, the Iraqi soldiers had resolved to surrender by the

¹² Department of Defense, *Conduct of the Persian Gulf War; Final Report to Congress* (Washington, DC: U.S. GPO 1992), 313-317.

¹³ Department of Defense, “1991 Defense Almanac,” *American Forces Press Service News Articles*, 2003, available from http://www.defenselink.mil/news/Aug2000/n08082000_20008088.html; Internet; accessed 10 March 2007.

¹⁴ John Mueller, *Policy and Opinion in the Gulf War* (Chicago, IL: University of Chicago Press, 1994), 69.

hundreds to the first American soldiers they could find. An army reputed to be the fourth-largest in the world and thought to have been seasoned by the Iran-Iraq War of the 1980s proved instead to act in many cases as amateurish as an untrained militia. Fearing above all the chemical weapons that Saddam's regime had used against the Iranians, the Allied Air Command placed atop its twelve-item priority list the destruction of nuclear, biological, and chemical weapons (NBC) sites.¹⁵ Happily for American commanders at every level, the worst case scenario threats they had envisioned never materialized.

Gordon criticizes the American generals severely for their failure to learn from the conduct that the Iraqi troops displayed at the Battle of Khafji early in the war. As soon as they faced superior fire power, the Iraqis fled in panic, which they would do in most engagements with the American forces. General Schwarzkopf, however, did not depart from the plans that his staff had made on the assumption that the Iraqis would fight a determined resistance.¹⁶ Thus, a historian may choose between two perspectives on the issue of fratricide. Either the percentage rate of fratricide deaths appears enormous compared to that of previous wars, or the rate of battlefield casualties caused by the enemy seems remarkably low next to other figures.

Considering the statistic that over seventy thousand Iraqi troops surrendered while the Iraqi Armed Forces killed fewer than one hundred fifty Americans, and that accidental deaths nearly equaled battlefield deaths, the latter perspective proves more consistent with other available information. Both fratricide and accident rates stood at higher levels than previous wars recorded in comparison to combat losses. The combat

¹⁵ Michael W. Lewis, "The Law of Aerial Bombardment in the 1991 Gulf War," *The American Journal of International Law* 97 (July 2003): 490.

¹⁶ Michael R. Gordon, *The Generals' War: The Inside Story of the Conflict in the Gulf* (Boston, MA: Little and Brown 1995), 464.

death toll can therefore be considered low due to Iraqi incompetence rather than American shortcomings causing strangely high rates of fratricide and accidents. A smaller coalition lost similar numbers of troops to accidents in Iraq in the first six months of the 2003 invasion, but in that case the Iraqis killed more Americans in terms of numbers and percentage.¹⁷

On a number of occasions, the Allies of multiple nations in the Coalition found that they lost more men to their own fire than to that of the enemy. In the first ground combat between the Coalition and the Iraqi troops, on January 29, 1991, the Iraqis made a brief attack across the border into Saudi Arabia, seizing the town of Khafji for no more than one day. This first clash would significantly foreshadow later clashes between the Iraqis and the Coalition. The main weapons that the ground forces brought to bear against the Iraqis were Coalition air strikes, followed in popularity by artillery fire. To a large degree, Operation Desert Storm proceeded for the first time in history with ground elements simply directing fire from the air against the enemy rather than taking the main initiative for the fight.

A small party of Marines remained in Khafji as the Iraqis captured the town and evaded discovery while calling on the radio for artillery fire against the Iraqis. The only wounds this party suffered came from their friendly artillery. In the course of the Iraqi advance, American aircraft misidentified Saudi vehicles and bombed them mistakenly as they fled from Khafji. This incident prompted the nearby Syrian units, also members of

¹⁷ After seven months of Operation Iraqi Freedom, the Coalition had lost 138 soldiers in non-hostile incidents, but Iraqi soldiers and insurgents had killed 251, a ratio of nearly two to one. During Operation Desert Storm, by contrast, the ratio of accident deaths to combat deaths was nearer one to one. Michael White and Glenn Kutler. *Iraq Coalition Casualty Count*, 2008, available from <http://icasualties.org/oif/>; Internet; accessed 8 March 2007.

the Coalition, to comply with orders to place identifying markers on their vehicles.¹⁸ The Saudis nearly suffered the same fate from their friends on the ground, as the 3rd Battalion 3rd Marines narrowly avoided serving them with further fratricide. Because of vigilance and proper visual vehicle identification, however, the commander of the Marines gave the order to hold fire. The Marines sustained the worst episode of fratricide during the war as they withdrew in good order and called for air support on the Iraqi tanks near Khafji. The multiple Air Force A-10 Thunderbolt aircraft destroyed twenty-two Iraqi tanks, but a targeting flare that one pilot dropped among the Marines cost seven lives when a Maverick missile launched by the American A-10 slammed into a Marine Light Armored Vehicle (LAV-25). In the confusion and multiple maneuvers by both sides that night, a TOW missile from a fellow Marine vehicle on the ground disabled another LAV-25 and killed four personnel.¹⁹ In the case of the Battle for Khafji, confusion and disorientation in the night conditions proved the leading factors in contributing to the tragic loss of eleven American lives and one Saudi. If not for the vigilance of the Marines in holding fire from the fleeing Saudi armored personnel carriers, the episode could have cost more lives.

As reflected by this event, the most common episodes of fratricide involved armored vehicles. Of twenty-one soldiers in the Army killed by friendly fire, seventeen sustained their mortal wounds while operating armored vehicles, even if those vehicles did not closely resemble the enemy vehicles.²⁰ Although most crewmen in armored

¹⁸ Rick Atkinson, *Crusade: the Untold Story of the Persian Gulf War* (Boston, MA: Houghton Mifflin, 1993), 210, 213.

¹⁹ Otto J. Lehrack, *America's Battalion: Marines in the First Gulf War* (Tuscaloosa, AL: University of Alabama Press, 2005), 93, 98.

²⁰ Department of Defense, *Conduct of the Persian Gulf War; Final Report to Congress* (Washington, DC: U.S. GPO 1992), 591.

vehicles and aircraft had undergone significant training in identifying targets, all in time found that their optics were also the Achilles' heels of their arsenal. The truth proved devastating on many occasions that the weapons which Coalition units deployed could kill effectively from farther away than their operators could see to identify their targets. On the ground, a number of cases involved friendly forces firing before they had established clear visual identification. Air Force pilots in one particular case learned the hard way that some of the ground-to-air identification panels which armored vehicles carried did not show a signature above five thousand feet. Viewing British vehicles from high altitude, the A-10s deployed a devastating barrage that killed nine soldiers.²¹ In the hardest lesson of that war, the Americans learned the need for better resources for friendly forces to identify one another.

The other factors that contributed to fratricide included the typical fear that all soldiers experience in their first exposure to combat. This fear and its accompanying adrenaline contributed to a, "shoot first and ask questions later" attitude. In a few cases, units fired on friendly adjacent units that maneuvered so close to them that explaining their conduct can prove difficult. One such instance involved two Marine units clearing parts of the same minefield. The renowned "fog of war" factor appeared to combine with a trigger-happy nervousness on that part of the Marines to prompt this unfortunate episode.²²

An eagerness for the fray common to soldiers in their first combat situation also prompted the swift and deadly engagements of alleged targets that tragically turned out to be friendly forces. Lieutenant Colonel Hayles, the Battalion Commander whose conduct

²¹ Rick Atkinson, *Crusade: the Untold Story of the Persian Gulf War* (Boston, MA: Houghton Mifflin, 1993), 464.

²² *Ibid.*, 380.

this paper described in the introduction, disobeyed a direct order from his superior officer on the night that he fired the Hellfire missiles into two American vehicles. A swaggering Texan whose call sign, Gunfighter 6, speaks for itself, LTC Hayles had boasted that he would draw enemy blood first of all the men in his battalion and he assumed the unaccustomed position of copilot/gunner on an Apache helicopter flown by a Chief Warrant Officer. Hayles' eagerness likely contributed to his erroneous reading of the display graphics on his targeting computer, a theory proposed by fellow aviator James Towe in his Master's Thesis. The long range of the Apache's weapons played a key role in this incident, as the Hellfire missile can kill from eight thousand meters' distance, but target identification is difficult from farther away than fifteen hundred meters. Hayles opened fire from a distance of nearly thirty-five hundred meters, from which distance he had tried unsuccessfully to establish positive target identification.²³

The size of the formations and poor weather conditions made notable contributions to fratricide episodes. William Garrett's study of doctrine and fratricide revealed that most incidents occurred near the boundaries between units, early in the operations, and under conditions of limited visibility. LTC Hayles fired his fatal shots while enduring winds of twenty knots, which raised dust and reduced the visibility of the battlefield. Although limited visibility could explain his case to some extent, another Apache fired on a Bradley vehicle in perfect weather conditions. Mercifully, this gunner had looked through the wrong site aperture and his missile missed its mark. A third attack helicopter fired on the fleeing Saudis during the Khafji battle. Of these, the only three attack helicopter cases of fratricide, all involved target misidentification, but only

²³ James A. Towe, *Eliminating Fratricide from Attack Helicopter Fires: An Aviator's Perspective* (Fort Leavenworth, KS: U.S. Command and General Staff College, 1994), 88, 95.

one happened under poor weather conditions.²⁴ As a reason for faulty identification, weather played a minor role, always accompanied by other factors, in contributing to fratricide.

The eager attitude of the soldiers that contributed to Garrett's finding that most fratricide incidents happened early in the campaign also affected combat support soldiers. A small number of U.S. troops retained unexploded ordnance to their detriment. The General Accounting Office investigated the deaths of two Connecticut National Guardsmen from ordnance explosions. The GAO reported that the soldiers had picked up submunitions from artillery shells or possibly from rockets. The submunitions were small charges intended to separate from the main warhead on contact with the target and detonate against surrounding equipment, personnel, or the ground. A number of submunitions had failed to explode, which the GAO estimated had caused sixteen deaths when soldiers picked them up on the battlefield.²⁵

The GAO investigated tests the Army had conducted on the M483A1 projectile used by the 155mm Howitzers, the M509A1 projectile for the 8-inch howitzer, and the rocket projectile used by the Multiple-Launch Rocket System (MLRS). Army regulations required that all submunitions for artillery projectiles maintain a 95% first-time detonation rate. In its investigation of the conventional artillery shells, which dropped up to 180 submunitions each, the GAO found that every lot of submunitions met or exceeded the minimum standards for performance, usually experiencing a 98% first-time detonation rate.

²⁴ Ibid., 85-88.

²⁵ General Accounting Office, *Casualties Caused by Improper Handling of U.S. Submunitions* (Washington, DC: U.S. GAO, 1993), 1.

The MLRS, by contrast, distributing a carpet of 644 submunitions from each rocket, reflected a different record. Although some lots of M77 submunitions maintained rates for first-time detonation as low as 77%, the Army had issued recalls beginning in December 1989 for only a few lots of submunitions. The Army chose not to recall more lots due to the high costs of replacing MLRS rockets. The MLRS, developed to fight against the Red Army during the Cold War, experienced its first major usage in the Gulf War. As such, the failure rate of MLRS submunitions would not have proven a problem if only enemy soldiers had been finding them, as would have been the case in a Cold War engagement. During the Gulf War the MLRS, which could fire twelve rockets in five minutes and change its position, reloading in nine minutes, proved devastatingly effective against the Iraqi Army, earning the nickname “Steel Rain” from its enemy.

As to the threat that the submunitions posed to the soldiers on the battlefield, every soldier had received briefings as early as Basic Training and heard at least once a year renewed warnings to stay away from unexploded ordnance every time he fired weapons on a range. About this one issue at least, no soldier who had fired a weapon could possibly claim ignorance of the dangers posed by unexploded ordnance. The eleven soldiers from the Connecticut National Guard Unit who amassed M77 projectiles as souvenirs and suffered injury or death deserve the most generous share of the blame for their death through their personal stupidity.²⁶ The Army had accepted some risk in order to avoid the prohibitive expense of building entirely new rockets and the GAO

²⁶ Ibid., 2-7.

could measure the toll in sixteen lives. Thirteen additional soldiers died during the Gulf War from improper handling of ordnance, for a total toll of twenty-nine.²⁷

The non-hostile non-battle casualties for the United States totaled one hundred forty-five, including such causes as illnesses, vehicle accidents, aircraft crashes, accidental shootings, and such miscellaneous accidents as the collapse of a wall of sandbags. Although information in databases in print and on the internet about battlefield casualties is quite thorough, the same sources show a significant lack of information on non-battle deaths. One single ferry accident on December 22, 1990, killed all of the nine sailors who died in non-hostile conditions for the entire campaign.²⁸ Out of the total coalition strength of five hundred forty thousand, the one hundred forty-five deaths from assorted non-hostile non-battle causes never alarmed the leaders of the military sufficiently to prompt investigations. As a point of comparison, the first seven months of Operation Iraqi Freedom in 2003 yielded a non-hostile, non-battle figure of one hundred thirty eight deaths with a smaller coalition.²⁹

The causes and types of death showed no discernable pattern for Operation Desert Storm, nor did any major shortcoming appear to cause deaths, aside from the submunitions problem involving the MLRS projectiles. Overall, the non-hostile deaths during Desert Storm remained relatively low, with only the instance of fratricide attracting attention. Most of those episodes could be attributed to a lack of familiarity

²⁷ William B. Garrett, *Fratricide: Doctrine's Role in Reducing Friendly Fire* (Fort Leavenworth, KS: U.S. Army Command and General Staff College, 1993), 24.

²⁸ Andrew Layden, *Gulf War Debriefing Book: An After Action Report*. Central Point, OR: Hellgate Press, 1997, available from <http://www.leyden.com/gulfwar/casualshield.html>; Internet; accessed 7 March 2007.

²⁹ White, Michael and Glenn Kutler. *Iraq Coalition Casualty Count*, 2008, available from <http://icasualties.org/oif/>; Internet; accessed 8 March 2007.

with the makes of friendly vehicles and the excessive lethal range of American weapons, as well as human eagerness to engage the enemy.

The casualty assessments for the top Military Brass began, as always, long before the first combat began along the Saudi-Kuwait border. Clausewitz's famous quotation that war is politics by other means may be overly simplified, but political calculations accompany many of the decisions that Generals and political leaders make when waging war. Generals must produce for their political overseers in Congress and the White House reliable estimates of the costs in manpower and materiel of executing the current mission. All officers planning wars estimate the degree of determination that their citizens possess to fight and win despite the costs involved. The effects on public morale both of friendly and enemy casualties, as well as civilian casualties play some part in the plans that the generals make.

The Military Brass had employed simulation scenarios estimating the cost of the war, predicting fifteen hundred dead and ten thousand total casualties on the American side.³⁰ The estimate of thirty to forty pilots killed and one hundred fifty aircraft shot down significantly overestimated the abilities of the Iraqi air forces. In fact, no American aircraft fell to Iraqi pilots in air-to-air combat. The total loss of aircraft for the United States only reached seventy-five from all causes, including a few to ground fire. The Navy and Air Force lost a combined total of only twenty-six personnel during the campaign, only a few of whom were pilots.³¹ The phenomenal success of Operation Desert Storm, in which a large contingent of American soldiers deployed to the Persian

³⁰ Michael R. Gordon, *The Generals' War: The Inside Story of the Conflict in the Gulf* (Boston, MA: Little and Brown 1995), 132.

³¹ Department of Defense, "1991 Defense Almanac," *American Forces Press Service News Articles*, 2003, available from http://www.defenselink.mil/news/Aug2000/n08082000_20008088.html; Internet; accessed 10 March 2007.

Gulf and returned after only seven months at the cost of fewer than three hundred lives, gained a significant public relations victory for the Armed Forces commanders. The officers under General Schwarzkopf's command could attribute the relatively easy victory to the superior training and armaments of the American soldiers and to the inferior discipline and equipment of the Iraqi Armed Forces. Even the Republican Guard fared poorly against the onslaught of American fire power and fled in the face of the ground offensive. Michael Gordon in *The Generals' War* predicted that the low casualties from Desert Storm would cause unrealistically low expectations for future wars. Both the politicians involved and the public would expect easy campaigns and tolerate nothing that proved difficult.³² His observation in time proved highly prophetic, written eight years before Secretary Donald Rumsfeld and his Generals planned the invasion of Iraq for 2003.

For the air and ground campaigns, the Armed Forces developed a twelve-tier targets priority list, with nuclear, biological, and chemical (NBC) weapons facilities ranked at the top. Because Saddam Hussein had used chemical weapons against the Iranians, American forces naturally feared deployment of NBC weapons. Scud missile sites ranked second, followed by sites performing support, production, and research of weapons systems. Senior leadership and command, control, and communications (C3) systems occupied places four and five. Electrical power facilities, oil facilities, railroads and bridges, air fields, and naval ports ranked next. The strategic air defense system and the Republican Guard units represented the final two of the twelve priorities. These priorities revealed the desires of the Coalition commanders to prevent mass destruction,

³² Michael R. Gordon, *The Generals' War: The Inside Story of the Conflict in the Gulf* (Boston, MA: Little and Brown 1995), 470.

long-range attacks, including those against Israel, and to disrupt command structure and finally infrastructure elements with military significance. Judge Advocate General (JAG) officers reviewed target lists to ensure the Armed Forces' complicity with the law of war and to conduct military necessity and proportionality analyses. In a dramatic change since the Vietnam War, when napalm served as an anti-personnel weapon, the JAG officers actually made determinations in a number of cases that the recommended weapons were excessively large for their targets and suggested smaller munitions. Political and public relations concerns led the JAG officers to make every effort to avoid approving targets that would inflict civilian casualties even, in one case, when the Iraqis essentially used civilians as human shields.³³

The Generals commanding divisions and corps in the Iraqi theatre at multiple times took calculated risks, but more often erred on the side of caution in order to prevent casualties from friendly and even from hostile fire. The air commanders in particular took steps to reduce their risks of casualties during missions. In response to enemy ground fire that had damaged a B-52 bomber, Lieutenant General Charles Horner, the Joint Forces Air Component Commander, (JFACC) directed that the Air Force cease its low-altitude air strikes by January 19, 1991, in order to minimize the risk to pilots and airplanes. After the loss of two F-16 fighter-bombers during a mission code-named Package Q, the Air Force cancelled all further conventional daytime raids on Baghdad.

The Air Force suffered a public relations setback when a bombing raid on February 13, 1991, aimed at destroying command and control bunkers in downtown Baghdad reportedly killed a number of civilians taking shelter in the Al Firdos bunker,

³³ Michael W. Lewis, "The Law of Aerial Bombardment in the 1991 Gulf War," *The American Journal of International Law* 97 (July 2003): 490, 502, 505.

which also housed enemy intelligence personnel. Conducting risks versus benefits analysis, General Horner concluded that tactical considerations would preclude further Package Q bombing raids and political concerns led him to cancel all future raids on downtown Baghdad. Thus, in three instances, the Air Force reduced its degree of aggression in response to hostile casualties. As the ground war began, General Horner expressed his willingness for greater risks of casualties, including fratricide casualties, reminding his subordinates that he wanted to see aggressive conduct.³⁴

The Air Force suffered few non-hostile casualties, but inflicted a number of fratricide losses on the Marines at Khafji, on some British armored vehicles, and through the employment on three occasions of anti-radar HARM missiles that struck friendly radar sites. Reportedly, the Iraqi radar sites at which the missiles had been aimed shut down their operations and the missiles homed onto the nearest radar sites, which sadly were friendly. The Air Force attributed all or nearly all of the fratricide inflicted by their aircraft to mechanical failure by the weapons in each situation.³⁵ Although the radar homing explanation might explain some incidents, the explanation is so self-serving that strict scrutiny is in order. In the first case, all of the observers of the Khafji incident reported that the A-10 pilot dropped his spotter flare in the wrong place, near the Marines, and thereby caused the fratricide that his missile inflicted as he passed the group the second time.³⁶ His munitions did exactly what he told them to do, which unfortunately included taking American lives. Faulty target identification almost

³⁴ Williamson, Murray and Wayne W. Thompson, *Air War in the Persian Gulf* (Baltimore, MD: The Nautical and Aviation Publishing Company of America, 1995), 140, 161, 191, 276.

³⁵ Henry S. Larsen, *Fratricide: Reducing the Friction through Technology* (Fort Leavenworth, KS: U.S. Army Command and General Staff College, 1994), 14, 17.

³⁶ William B. Garrett, *Fratricide: Doctrine's Role in Reducing Friendly Fire* (Fort Leavenworth, KS: U.S. Army Command and General Staff College, 1993), 20.
Otto J. Lehrack, *America's Battalion: Marines in the First Gulf War* (Tuscaloosa, AL: University of Alabama Press, 2005), 98.

certainly caused the strikes that destroyed the British Warrior vehicles, taking nine lives, which further illustrates the weakness of the claim that mechanical failure caused all of the air-to-ground fratricide incidents.

What appears to be simple passing of the buck underscores the broader strategic worldview of the Joint Forces Air Combat Commander. The policy of the Air Force to avoid assigning guilt to their pilots agrees with the doctrinal claims that air power enthusiasts, General Horner among them, were making at that time. In order to improve on the Vietnam experience, in which six generals shared responsibility for air missions, General Schwarzkopf placed all Coalition air power under the JFACC, General Horner. Mindful that the Vietnam War strategy of gradual escalation of air power had proved ineffective, Horner's staff developed an air campaign plan, code named Instant Thunder, which called for overwhelming force to cripple the Iraqi Army. Horner predicted not only that air weaponry could destroy half of the total deployed Iraqi forces but also that air power alone might win the war against Saddam's aggression and drive him from Kuwait.³⁷ In practice, neither of these predictions proved realistic, but each prediction reflected Horner's worldview concerning air power. The general who would make grandiose predictions of air power capability would naturally attribute every error by a pilot to the malfunctioning of his weapons. Perhaps General Horner was not self-serving so much as he was unrealistically enamored with air power.

The ground offensive that famously lasted only one hundred hours saw additional risks tempered by caution at the highest levels. General Schwarzkopf, who barely mentioned casualties of any kind in his triumphant autobiography *It Doesn't Take a*

³⁷ Williamson, Murray and Wayne W. Thompson, *Air War in the Persian Gulf* (Baltimore, MD: The Nautical and Aviation Publishing Company of America, 1995), 17, 38.

Hero, nevertheless recorded two very tense warnings that he gave to his commanders as their campaigns progressed. A fratricide episode involving American aircraft and British surface vehicles near the end of the ground campaign prompted Schwarzkopf as Commander in Chief of the operation (CINC) to call General Horner to request greater caution before his pilots engaged ground targets. He also warned his Marine forces commander, Lieutenant General Walter Boomer, to avoid fratricide against Saudi forces as they attacked Kuwait City in a joint operation. The CINC saw both tactical and international issues at play when the Marines rode alongside Saudi troops.³⁸

Lieutenant General Frederick Franks, commander of VII Corps, which represented about one third of the total Coalition ground forces, halted his attack on the night of February 24-25, in order to prevent fratricide in an armored column twenty miles wide and forty miles long. On a later night, Major General Paul Funk, commander of 3rd Armored Division and a part of Franks' Corps, suspended a night attack for the same reason after he lost three men to aerial fratricide.³⁹ As the campaign neared its end, Franks twice canceled or delayed a nighttime forward passage of lines maneuver because he feared that the confusion might foster fratricide. In a passage of lines, the vehicles and troops of one large unit, a brigade or a division, pass through the formations of another large unit in order to assume a new position.⁴⁰ In his attempts to avoid fratricide, General Franks ordered his units not to fire unless fired upon, which seemed to conflict with the need for aggressive activity in the face of the enemy, but these orders reflected his priorities. He feared fratricide more than he feared the firepower of the Iraqis.

³⁸ H. Norman Schwarzkopf, *It Doesn't Take a Hero* (New York, NY: Bantam Books, 1992), 538, 541.

³⁹ Michael R. Gordon, *The Generals' War: The Inside Story of the Conflict in the Gulf* (Boston, MA: Little and Brown 1995), 379-380, 393.

⁴⁰ Rick Atkinson, *Crusade: the Untold Story of the Persian Gulf War* (Boston, MA: Houghton Mifflin, 1993), 464, 478.

The most controversial and tactically costly precaution concerned the Fire Support Coordination Line. This line, set by the various ground generals in their sectors of operation, communicated the estimated front line trace of Coalition ground units. To minimize the risk of fratricide, the Air Force was forbidden to strike any target south or west of the FSCL. When Lieutenant General Gary Luck, commander of XVIIIth Airborne Corps, the westernmost Coalition unit, wanted to enable his helicopter pilots to operate without Air Force interference, he chose to move the FSCL north of the Euphrates River on February 27, 1991. In so doing, he allowed several Iraqi units to escape from Kuwait without the threat of air strikes until General Schwarzkopf's staff detected the discrepancy and moved the FSCL back to its previous location. Ironically, Luck's tactical mistake may have aided the Coalition slightly in the public relations realm. The "Highway of Death," a narrative, in which the American news media reported the Air Force slaughtering the hapless retreating Iraqi troops, would have involved greater destruction had Luck not moved the FSCL.⁴¹

A final cause of fratricide involving the military brass concerned the lack of devices to enable friendly forces to recognize one another. Although daytime recognition symbols included a painted inverted "V" on every vehicle and orange plastic VS-17 panels on armored vehicles for air-to-ground recognition, the Armed Forces never distributed recognition devices for night conditions. Battery-powered infrared beacons and thermal tape did not make their arrival on the battlefield until February 26, when the ground war had nearly concluded. Even those commanders who managed to install the IR beacons found that they improved vehicle identification conditions very little.

⁴¹ Williamson, Murray and Wayne W. Thompson, *Air War in the Persian Gulf* (Baltimore, MD: The Nautical and Aviation Publishing Company of America, 1995), 29.

Lacking the devices for effective recognition at night, the ground force commanders provided doctrinal remedies or showed the aforementioned tactical timidity. Task Force commanders instructed their armored units not to engage suspected enemy troops at distances greater than two thousand meters. A number of tank commanders disobeyed this instruction and paid the price by inflicting fratricide casualties.⁴² Although regulations had established green and white star clusters as the official pyrotechnic signals for units to launch in reaction to taking fire from their own forces, multiple ground units never received these devices.⁴³ Both the Center for Army Lessons Learned in its newsletter and the Department of Defense in its *Final Report to Congress* acknowledged the need for better anti-fratricide devices for ground-to-ground recognition and more Global Positioning Satellite (GPS) devices to prevent units from getting lost or disoriented. In reaction to the phenomenon of weapons killing beyond their operators' ability to identify targets, the Department of Defense also called for better optics on weapons systems.⁴⁴

Concerning non-hostile, non-battle casualties, which numbered 145, the various branches of the Armed Forces have expressed few reactions. The Department of Defense report makes no mention at all of deaths caused by accidents, except when furnishing the names of the dead. Although the Army made a number of recommendations for improved ground warfare recognition, the Navy saw no need to do the same. The Chief of Naval Operations' report, "The United States Navy in Desert Shield/Desert Storm,"

⁴² William B. Garrett, *Fratricide: Doctrine's Role in Reducing Friendly Fire* (Fort Leavenworth, KS: U.S. Army Command and General Staff College, 1993), 21, 23.

⁴³ Committee on Governmental Affairs. *The Investigation of a Friendly Fire Incident During the Persian Gulf War*, (Washington, DC: US GPO, 1995), 28.

⁴⁴ Department of Defense, *Conduct of the Persian Gulf War: Final Report to Congress* (Washington, DC: U.S. GPO, 1992), 597.

enumerates lessons learned about interoperability and cooperation among the services, but makes no mention at all of casualties.⁴⁵

Even in areas in which doctrine had established safety regulations for several decades, negligent conduct at various levels led to non-hostile casualties. In addition to the aforementioned ordnance souvenir collectors, seven combat engineers amassed several unexploded munitions in a pile against safety regulations and all died when one of the explosives detonated, triggering a chain reaction.⁴⁶ As reflected in their complete absence from after-action reports, these casualties made no impression on the upper military brass at all. The ferry accident that claimed nine lives, the twenty-three total servicemen who died from ordnance mishandling, and a number of vehicle accidents could be considered, along with non-battle deaths from other wars, as the accidents that tend to happen in a deployed force totaling 540,000 servicemen. Therefore, the upper brass saw no need to make specific mention of these casualties.

For at least one time in history, the American Armed Forces managed to give the public a war that it would tolerate in all of its particulars. A war in which the enemy had neither invaded American soil nor taken American lives, nor threatened the United States directly, the Persian Gulf War necessarily had limited evident importance to American interests and limited strategic significance relative to the declared wars of previous centuries. The Armed Forces correctly planned for a short span of public indulgence. Politicians and news reporters expressed skepticism about whether the United States Armed Forces truly needed to fight the Persian Gulf War. As the Middle East is a part of

⁴⁵ Chief of Naval Operations. "The United States Navy In 'Desert Shield' / 'Desert Storm'" Washington, DC: Department of the Navy, 1991, available from <http://www.history.navy.mil/wars/dstorm/index.html>; Internet; accessed 21 February 2007.

⁴⁶ Rick Atkinson, *Crusade: the Untold Story of the Persian Gulf War* (Boston, MA: Houghton Mifflin, 1993), 436.

the world best known for its oil exports, the average citizen might perceive the campaign as an attempt to stabilize the price of gasoline, but public opinion polls in August and November 1990 showed extremely low approval for a war based on oil or gasoline interests; as few as sixteen percent of responders would approve of such a major war. The strategic goals of protecting Saudi Arabia, restoring Kuwait's government, and rescuing American hostages commanded similarly low approval for "a major war," although a majority of responders said that these interests justified "military involvement." The administration therefore knew that the public would only approve a short campaign, and promised as much.⁴⁷

Senator Sam Nunn, a highly respected politician in matters of military affairs, opposed the war at its outset, citing fears over the casualty numbers and the duration of the conflict. The Georgian openly disputed President Bush's predictions of few casualties and a short deployment, and led a majority of the Democrats in Congress to vote against the war. If the president could not keep his promises about the conduct and duration of the war, they planned to place their dissenting voices in the official record. President Bush, Secretary of Defense Richard Cheney, and General Colin Powell, Chairman of the Joint Chiefs of Staff, all knew well that the public would support a short conflict with a perceivable and attainable goal. As the casualties mounted and success appeared less likely, public support would erode.⁴⁸ As far as the Bush Administration was concerned, they lived on borrowed time where the approval of the public was concerned. Over one decade later, President George W. Bush found a similar public relations situation when he led another war effort against Saddam Hussein's regime.

⁴⁷ John Mueller, *Policy and Opinion in the Gulf War* (Chicago, IL: University of Chicago Press, 1994), 124-125, 250-251.

⁴⁸ *Ibid.*, 128.

Hoping to derive support from the unity of several nations, the administration crafted a broad-based coalition of several allies from Europe and the Middle East. The public needed to perceive the United States leading several allies who contributed tangibly to the effort to complete a worthwhile mission. In this case, the most acquisitive regime in the Middle East was expanding its holdings by force. Iraq, by invading Kuwait, both endangered the supply of oil from the Middle East and flexed a rhetorical muscle in an attempt to intimidate the other nations of the region. As the greatest Western power in the post-Cold War era, the United States needed to take on the role of coalition leader, supplying sufficient resolve and military forces for victory so that smaller nations would contribute as well. In spite of Saddam's attempt to divide the Coalition by attacking Israel, the Coalition maintained its integrity until Iraq had fled Kuwait in defeat.⁴⁹

The approval of the American public for the Persian Gulf War depended principally on the numbers of casualties and the duration of the deployment. Calculating accurately the priorities of the public, the Department of Defense kept its word that the vast bulk of troops would come home within months of the conclusion of hostilities. The amazingly low numbers of total casualties and the rapid return of the troops ensured public approval for the war effort that almost never wavered.⁵⁰

In the months following the conclusion of Operation Desert Storm, approximately thirty-five families in the United States became aware of a policy that the Armed Forces had adopted without informing the public. For all fratricide cases, the Department of Defense decided to investigate the circumstances of the allegations without informing the

⁴⁹ Bennett, Andrew, Joseph Leggold and Danny Unger, "Burden-Sharing in the Persian Gulf War." *International Organization* 48 (Winter 1994): 73-75.

⁵⁰ John Mueller, *Policy and Opinion in the Gulf War* (Chicago, IL: University of Chicago Press, 1994), 69.

families of the victims and complete all of its investigations after the troops had returned home. On August 13, 1991, the Department of Defense informed thirty-five families that their husbands, sons, or brothers had been killed by fratricide and not hostile fire, as previous notifications had maintained.⁵¹ By August 1991, with the war long over and the troops home safely, the Department of Defense knew that no major public reaction would follow the disclosure of the details of fratricide incidents because the war had become yesterday's news. In this case, the military leaders chose to prioritize the Army's esteem in the public relations realm over the needs of the families of fratricide victims to know the truth promptly. In some cases, a lengthy investigation was necessary, but in cases such as the killing of Corporal Lance Fielder, the soldiers on the ground knew immediately that fratricide had caused his death. Even so, his family would not officially learn the true cause of his death until August 1991.

In a revealing illustration of this course of events, John Mueller's book *Policy and Opinion in the Gulf War* includes the results of dozens of public opinion surveys, many of which tested the tolerance of the public for casualties, but none of which concerned fratricide. In his chronology of the aftermath of the war, ending with the 1992 election, Mueller did not include the date that the fratricide cases became public. Even for a political science professor attempting to gauge public opinion about the war's aftermath, the public reaction to the fratricide cases proved so small as to be overlooked.⁵² So few soldiers died from fratricide that the public did not consider them at all when evaluating the war. For the same reason, the news reporters conducting the surveys did not draw

⁵¹ Department of Defense, *Conduct of the Persian Gulf War: Final Report to Congress* (Washington, DC: U.S. GPO, 1992), 591.

⁵² John Mueller, *Policy and Opinion in the Gulf War* (Chicago, IL: University of Chicago Press, 1994), 83.

attention to the fratricide statistics. The Department of Defense had succeeded in avoiding scrutiny on issues of fratricide.

The single public event that made headlines briefly did not come to light until four years later. In 1995, Senator Fred Thompson of Tennessee convened his Committee on Government Affairs to hold hearings on a General Accounting Office investigation originally begun by Senator James Sasser. Fielder's parents received notification of their son's death in August 1991, learning for the first time through official channels that soldiers of the 3rd Armored Cavalry Regiment, (ACR) instead of Iraqi troops, had killed him. In the early morning hours of February 27, 1991, one squadron of the 3rd ACR under Lieutenant Colonel (LTC) John Daly advanced to capture Umm Hajul airfield near the border between VII Corps and XVIII Airborne Corps. The lead troop of Daly's squadron neared the airfield, spying soldiers in what appeared to be entrenched positions in front of a large armored vehicle of nondescript shape. The soldiers were engineers from the 54th Engineer Battalion, 1st Armored Division, whose M548 Ammunition Carrier had broken down. Captain (CPT) Bo Friesen, commander of the lead troop, was not aware that he had crossed the Corps boundary, but he had been briefed that there would be no friendly units for several miles to his front. He ordered his men to fire warning shots, of which some rounds struck the trailer of the ammunition carrier and set it ablaze.

First Lieutenant (1LT) Kevin Wessels of the 54th Engineers launched a green star cluster from an M203 grenade launcher in an attempt to illuminate the area and to identify his men as Americans. It is likely that Captain Friesen mistook this shot as hostile fire and cued his order that his men fire a few shots at the troops on the ground. A

following short burst of fire from Friesen's men wounded Sergeant James Napier, but the captain ordered them to cease fire so that he could allow the supposed Iraqi troops to surrender. LTC Daly sped to the scene in a Bradley Fighting Vehicle with his command group and ordered his gunner to fire the shots that killed Corporal Fielder as he tended Napier's wounds. Daly's arrival caught CPT Friesen by surprise, as did his fatal shots. Wessels placed his hands on his head and walked into the line of fire to identify himself and his men as Americans.⁵³

According to both 1LT Wessels and CPT Friesen, Daly made a number of remarks about the "fog of war" and needing to "keep this event under our hats." Both junior officers received reprimands, but Daly arranged for himself and three other soldiers involved in the event to receive Bronze Star Medals with "V" device for Valor. The 3rd ACR Commander, Daly's superior and fellow West Point graduate, Colonel Starr, wrote an Officer Evaluation Report calculated to end Captain Friesen's career. Both Friesen and Wessels subsequently resigned their commissions in the Army. The first two investigations that the 3rd ACR conducted into the incident absolved LTC Daly of all responsibility for the death of CPL Fielder, attributing his sad demise to the confusion that accompanies all military operations. The General Accounting Office found that the investigating officer possessed inferior rank to the officers he was investigating, which is against Army regulations, and that he failed to gather evidence thoroughly. Only the persistence of Fielder's family and the zeal of Senators Sasser and

⁵³ Committee on Governmental Affairs. *The Investigation of a Friendly Fire Incident During the Persian Gulf War*, (Washington, DC: US GPO, 1995), 18.

Thompson enabled the case to receive the hearings required for the government to ascertain the truth.⁵⁴

Fielder's family received notice on March 2, 1991, that Iraqi soldiers had killed their son in a firefight. On May 2, one of Corporal Fielder's fellow soldiers called his mother to tell her that he had died from fratricide, although no official Army channels confirmed this report until August 13, 1991. Deborah Shelton, Lance Fielder's mother, expressed enduring sorrow that the Army had told her an initial lie about her son's death and that COL Starr and LTC Daly had covered their lies with valorous tales and medals.⁵⁵ In Fielder's case, like that of LTC Hayles and the vehicles he fired on from his Apache helicopter, the men on the scene never doubted that fratricide had taken place.

COL Starr's cover-up along with LTC Daly of his fratricidal shots contrasted with the experience of LTC Hayles, whose superiors relieved him of command immediately following his fratricide against the American vehicles.⁵⁶ Although the Armed Forces concealed the details about fratricide cases until August 13, the attempt to protect the accidental perpetrators of fratricide, such as LTC Daly and LTC Hayles, who held equal rank and position but experienced opposite official reactions, was not a matter of broader policy. Clearly, the reaction of superior officers could vary from one incident to another, but due to the late revelations of the facts, the public remained unaware of the fratricide episodes of the Persian Gulf War. The public assessment of the war remained unanimously positive for the succeeding decades.

⁵⁴ Richard C. Steiner, Director. "Investigation of a U.S. Army Fratricide Incident." United States General Accounting Office, April 1995, 23.

⁵⁵ Committee on Governmental Affairs. *The Investigation of a Friendly Fire Incident During the Persian Gulf War*, (Washington, DC: US GPO, 1995), 30.

⁵⁶ Rick Atkinson, *Crusade: the Untold Story of the Persian Gulf War* (Boston, MA: Houghton Mifflin, 1993), 320.

American politicians and Generals who wage war in the modern era can remain within the brief attention span of the American public when they ensure rapid deployment to a hostile area, swift and successful engagement, and above all, few casualties and rapid re-deployment to the United States. As they conducted joint operations in Kuwait, the Armed Forces sought to minimize fratricide and confusion by the use of boundaries, tactical caution, and a number of recognition devices. Ultimately, however, in 28 separate episodes, the precautions proved inadequate, and friendly fire resulted. Although unethical in view of the rights of families to know the truth about how their relatives died, the Army's policy of withholding information on fratricide casualties until August 1991 ultimately won a victory in the information war because few Americans outside the military ever found out about these episodes. As a matter of policy, honest, accurate, forthright reporting is always the standard the Army sets for its own officers making internal reports. An organization valuing professional conduct in communications with the public, the Armed Forces should demand no less than the same honesty and accuracy of their communications with the families of casualties.

The victims of this strategy of initial misinformation included bereaved families who expressed shocked dismay at the conduct of the Armed Forces. The discovery that the soldier whom they had heard died a gallant death on the field of battle in the face of the enemy had actually fallen to fratricide prompted disillusion on the part of some soldiers' family members, most prominently the family of Corporal Lance Fielder. To the public, fratricide notwithstanding, the historically small number of casualties made the Persian Gulf War an acceptable investment of military manpower. For the high

Military Brass, non-battle casualties represented an acceptably low number on which they did not even concern themselves to report in most cases.

In some cases, the question whether soldiers died from fratricide is ambiguous and in need of thorough investigation. Clearly, no investigation into the cause of Lance Fielder's death was necessary, so an investigation should only have sought to assign guilt appropriately. The Army faced strict scrutiny in Senator Thompson's hearing room over Corporal Fielder's case, and with a few exceptions, the policy of the Armed Forces regarding casualty reporting changed markedly in the following thirteen years. During Operation Iraqi Freedom, the U.S. military typically reported deaths by friendly fire within two days. The Army still conducted investigations into the causes of friendly fire incidents, but it did not report friendly fire deaths as hostile fire deaths with one notable exception.

When friendly forces killed former football star and Army Ranger Specialist Pat Tillman in Afghanistan on April 22, 2004, the Army initially chose to conduct an investigation and reported him killed by enemy fire. Like the Fielder case, soldiers at the scene never doubted that Tillman's death had come at the hands of friendly forces. The *Arizona Republic* reported the results of the Army's investigation nearly one month later, which led to several news stories and scrutiny of the Army's policy.⁵⁷ For the most part, the Army had followed a policy of reporting friendly fire deaths promptly and accurately, but some of Tillman's superiors apparently attempted to avoid the bad publicity that would accompany a report that his own forces had killed him unintentionally. Instead, the Army reaped a whirlwind of negative publicity as soon as the press exposed the inaccuracy of the initial reports on Tillman's death.

⁵⁷ Josh White, "Tillman Killed by 'Friendly Fire,'" *The Washington Post*, May 30, 2004, A1 (L).

With the exception of the Tillman case, the leaders of the U.S. Armed Forces corrected their policies on fratricide deaths following Operation Desert Storm. Although some observers, including Rick Atkinson and Corporal Fielder's family, refer to the 35 fratricide deaths as "many" and observe that fratricide claimed a large percentage of the total battle casualties, the 35 deaths made up a larger-than-average percentage of the total death toll only because the Iraqi Army did not fight with the determination that the American Armed Forces had expected. In view of the 1500 deaths and 10,000 casualties that the Armed Forces expected, the Iraqi Army's very timid conduct in the face of American troops served to minimize the number of losses to hostile fire. Thus, both fratricidal and accidental deaths represented unusually large percentages of losses because combat losses fell far short of expectations. The lack of reaction from the public after the revelation of the death of Corporal Fielder and LTC Daly's cover-up showed that the general public considered the fewer than three hundred total deaths an acceptably small price for victory, regardless of causes.

While attempting to discover the causes of non-hostile casualties, an investigator will find very little material on non-hostile casualties that are not related to fratricide or ordnance accidents. Indeed, even comprehensive databases that recorded the exact names and causes of death for the soldiers killed in battle generally fail to record what exact mode of death befell the 145 soldiers who died from non-battlefield causes. Although the 3rd Armored Division recorded every death with precise descriptions of causes, no such corresponding database for other units appears to exist. The occasional car accident, helicopter crash, ferry boat accident, or accidental shooting generally received no coverage. The questions still remaining concern the measures that the Armed

Forces took to counter ordinary deaths from accidents. The Navy makes no mention of its single most casualty-producing event in its analysis of Operation Desert Storm and apparently considers the nine lives lost in the ferry accident on December 22, 1990, a minor footnote. Historians have only just begun to tell the story of the Army Safety Program and what changes the Desert Storm experience wrought.

CHAPTER 5: OPERATION IRAQI FREEDOM
NON-HOSTILE CASUALTIES IN “THESE KINDS OF WARS” FROM THE
KOREAN WAR TO OPERATION IRAQI FREEDOM

In the middle of March, 2003, President George W. Bush called on Saddam Hussein to abdicate his power in Iraq or face the full brunt of the American forces currently massing on the border between Iraq and Saudi Arabia. The rapid conquest of Baghdad and the remainder of the country, the capture of Saddam Hussein, and the first free elections in Iraq’s history now belong to history. Through the hindsight that comes with the passage of time, historians will be able to judge the long-term wisdom and folly of the campaign. The depth of Iranian involvement in supplying the insurgency, the actual story of Saddam Hussein’s weapons programs, and the connections between Saddam Hussein and terrorist organizations prior to the war remain open questions that future evidence may alter significantly. The adage appears quite accurate that historians do not write the first objective histories until one hundred years after the events they describe.

The collective historical memory of Americans regarding the war will benefit enormously from hindsight. Whether a relatively stable democratic nation or a chaotic civil war battlefield emerges from the strife of the current war, observers will imagine that the final result had always appeared inevitable. At present, the timeline of the campaign to capture Baghdad, the precise casualty figures of the first five years of combat and occupation, and the trends in casualty types, represent some of the only quantifiable aspects of the war.

The prelude to Operation Iraqi Freedom began just over a year after the conclusion of the major combat phase of Operation Enduring Freedom in Afghanistan. The campaign in Afghanistan removed the Taliban regime from power in favor of the Northern Alliance, a rival tribal group that could assume power relatively quickly. American Special Forces, Marines, and Army infantry units coordinated the efforts of Afghan and American ground troops with superior American fire power from the air. As a result of their efficiency, the major combat phase of the campaign lasted only a few weeks, and the Americans lost so few casualties that few political or media commentators complained about the costs in human lives. Like Operation Desert Storm, Operation Enduring Freedom consumed relatively little time and satisfied the desires of the public for a quick and seemingly easy war. As the Bush administration began identifying Iraq as the next theatre of the War on Terror, the American public and Representatives in Congress expected another short campaign.

Militarily, Operation Iraqi Freedom tested the viability of the Powell Doctrine, the group of strategic principles that General Colin Powell had outlined prior to Operation Desert Storm and had instituted for future campaigns. President George H. W. Bush's Secretary of Defense, Richard Cheney, and the Chairman of the Joint Chiefs of Staff, Colin Powell, had taken new jobs under President George W. Bush as Vice President and Secretary of State respectively. In a manner of speaking, the architects of the Powell Doctrine retained powerful positions and few important faces had changed.

The Powell Doctrine emphasized reversing the pitfalls of Vietnam, consisting of overwhelming force, clear and regularly reviewed political and military objectives, an exit strategy, and the support of the American people. Until Operation Iraqi Freedom, the

Armed Forces high command had also sought an exit strategy for every post-Vietnam conflict. In practical terms, these tenets meant that the United States would not fight a limited-intensity conflict with undefined or unlimited commitments. Political objectives ensured the United States would not prop up military dictators who repeatedly overthrew one another, as the Kennedy, Johnson, and Nixon administrations had done in South Vietnam. Military objectives required problems with military solutions. Strong, unfettered conventional forces would strike defined military targets and do so in support of a democratic regime.¹

In Iraq, the Armed Forces accomplished their immediate military objectives with amazing speed and garrisoned the country to allow time for the political elements of the strategy to develop. The American civilian administration under L. Paul Bremer attempted to construct a democratic regime, one in which Shias, Sunnis, and Kurds would share power in a Parliamentary government. The efforts of Bremer and his delegation bore fruit when they departed Iraq a few days ahead of schedule and left the country to hold its first elections under a new Constitution. The Powell Doctrine emphasized that American soldiers not die in a proxy war with no perceivable political progress. The many Iraqi voters displaying purple fingers that appeared on television assured American citizens that the Iraqis were at least attempting a democratic process.² The armed resistance that the United States faced in Iraq, however, did not end with the fall of Baghdad, the capture of Saddam Hussein, or even with the execution of Saddam Hussein.

¹ John Prados, "Wise Guys, Rough Business: Iraq and the Tonkin Gulf," in *Iraq and the Lessons of Vietnam*, ed. Lloyd Gardner and Marilyn Young (New York and London: The New Press, 2007), 107.

² L. Paul Bremer, *My Year in Iraq: the Struggle to Build a Future of Hope* (New York: Simon and Schuster, 2006), 395.

Instead, American soldiers fought against a guerrilla enemy while trying to train and equip the Iraqi Army to assume responsibility for the security of Iraq.

To minimize its commitment and casualties, the Bush Administration immediately implemented the tactic that President Nixon called “Vietnamization.” Over time, as the Americans trained Iraqi Army and police to perform occupation duties, the Iraqis took over the responsibility for portions of Iraq. The process proved so time-consuming that a number of American citizens decided that the benefits did not justify the investment in blood and money. In the absence of an exit strategy, public approval declined with passing time and mounting casualties, as had been the case in the attrition wars of the twentieth century.

In the grand scheme of the war, the coalition has never lost as many as one percent of its soldiers killed in any given year. During the two most costly years to date, 2004 and 2006, the coalition lost 755 and 751 soldiers to hostile activity, which represented almost exactly one half of one percent of the coalition’s strength. After nearly five years in combat, in the early months of 2008, the total casualties of the United States, including non-hostile losses, stood just above 4,000 dead. During the worst six months of combat in Iraq, the insurgents inflicted fewer deaths on the coalition than the NLF and PAVN caused during a single week of the Tet Offensive in 1968.³ The casualty numbers for OIF differ markedly from those of Korea and Vietnam in terms of scale.

At the local level of the Iraq theatre, the trends in hostile casualties reveal a fairly clear course of insurgent activity. The regime of Saddam Hussein fought with rather feeble efforts, reminiscent of their performance in Operation Desert Storm, against the American invasion in March 2003. In the few places where Iraqi soldiers and Fedayeen

³ John Pimlott, *Vietnam: the Decisive Battles* (Edison, NJ: Chartwell Books, 2003), 138.

paramilitary forces attempted to stage spirited defenses, they managed to defend only for a short length of time. The casualties enemy forces inflicted on the mostly American Coalition troops in March 2003 in some cases indicated the last time that the soldiers would fight for Saddam Hussein. Most Iraqi troops retreated in the face of the American advance or discarded their uniforms and fled before the American troops arrived. A relatively calm period followed in the early days of the occupation until the waning months of 2003. Insurgent activity began in earnest at that time, making the year 2004 the most costly year of the occupation's first four years.

Insurgent activity was initially concentrated in Baghdad and the provinces adjacent to Baghdad, most notably Anbar Province. Although the violence declined in the other provinces in 2007, the strife in Baghdad continued at a consistently high level until a steady decline began in September 2007. Baghdad's high level of violence caused the total coalition death toll of 2007 to surpass the Coalition losses of 2004 despite the decline in Anbar's insurgent activity. In November and December 2007, the hostile losses of Anbar province declined to none, and hostile losses in Baghdad fell below 10 for two consecutive months. The entire Coalition lost only 24 soldiers from all causes in December 2007, whereas a mere seven months earlier Baghdad alone had claimed over twice that number.

In 2007 General David Petraeus assumed overall command of the Coalition and implemented a counter-insurgency strategy that involved increasing American troop numbers. Called the "surge," this strategy included combating sectarian militias and defeating insurgents in their strongest areas, principally Baghdad. Militarily, the "surge" definitely succeeded, leaving the political and military high command the task of

managing the success of the campaign in Iraq. General Petraeus and his civilian superiors have debated how quickly or gradually the United States should decrease the size of its military presence in Iraq. The current situation of low casualties creates the potential for a longer deployment than might have seemed possible in the late months of 2006, when insurgent activity increased.

Thanks to the relatively low number of overall losses, comparable in rate to the casualties of Desert Storm, a casual observer can ascertain the precise number of casualties in Operation Iraqi Freedom with ease. The Department of Defense (DOD) releases official reports of deaths, and icasualties.org, an internet site, categorizes the deaths by the date, cause of death, and province or region in which each soldier died. A comparison of the icasualties.org statistics with known information shows the site to reflect events accurately. The 1st Battalion 108th Armor lost three men, Specialist (SPC) Joshua Dingler, Sergeant (SGT) Paul Saylor, and SGT Thomas Strickland, to a non-hostile vehicle accident in Mahmudiyah on August 15, 2005, which the website database reports accurately. On the following day, another soldier, SPC Michael Stokley, died in a hostile Improvised Explosive Device (IED) attack at an outpost west of Mahmudiyah; the database reports accurately that this incident occurred in southwest Baghdad. Two men succumbed to one hostile IED attack on August 31, 2005. The database records the latter two deaths on September 1, the day that the DOD reported the deaths.⁴

⁴ 1st Battalion 108th Armor patrolled an area south of Baghdad in Babil Province from three small posts in Mahmudiyah, Lutayfiyah and Yusufiyah for five months in 2005. Mahmudiyah and Lutayfiyah lay roughly due south of Baghdad, whereas Yusufiyah lay several miles to the west. The six men that 1/108th Armor lost received prompt and accurate accounting in the icasualties.org statistics. Joe Shubert, *Task Force Rough Rider: Operation Iraqi Freedom III* (Atlanta, GA: Press Unknown, 2006), 12-13.

The database at icasualties.org is accurate, but the creators make no distinctions in numbers calculations between hostile and non-hostile losses. The database counts the soldiers who take their own lives or die from natural causes as equal to combat casualties, which slightly inflates the number of “casualties” killed by the insurgents. Over the course of the campaign from March 2003 through September 2007, a period of four and one half years, a total of 758 Coalition troops have died from non-hostile causes. This sum exceeds the hostile Coalition casualties of the most costly years, 2004 and 2006. Essentially, combining non-hostile and hostile losses adds an extra year of perceived hostile losses for every four years that the United States fights the war. For purposes of better contextual understanding of the casualties in Iraq, a statistician might separate the hostile from non-hostile losses. Such a method allows an investigator to discover how many soldiers the insurgents have killed versus how many have fallen victim to accidents or natural causes. In addition, the trends of losses emerge when the investigator separates casualty numbers by type and province.

Table 5.1, “Hostile Casualties in Iraq by Province,” reflects the hostile monthly losses in each province and relegates the total non-hostile losses of each month to a separate column. The table includes a calculation of the total losses for each month, hostile and non-hostile, so as to assure that the table correlates with the icasualties.org database. For each monthly period, the province that experienced the greatest number of casualties is reflected in bold type. On eleven occasions, the total non-hostile losses for a month exceeded the hostile losses of the most costly province. In two other months, the non-hostile number equaled that of the most costly province, Baghdad. Thus, on 13 occasions, the non-hostile losses of the war in Iraq surpass the losses of the province

where the insurgents carried out their most successful missions. Over the 56 months that the war has proceeded, Anbar Province cost the greatest number of hostile casualties on 24 occasions. Baghdad follows Anbar with sixteen months of most-costly status, but Baghdad had led in hostile losses for six of the seven months leading up to its decline in November 2007. Salah-ad-Din province and Dhi Qar province each led in hostile losses once.

The data of Table 5.1 suggest that the insurgents have waged their war for control of Iraq primarily in Baghdad and Anbar Provinces, and secondarily in Salah-ad-Din, Diyala, Babil, and Basra Provinces. Insurgents in Anbar and Baghdad have each claimed over 1,000 Coalition lives by hostile means, but in no other province have they killed more than 304. The 304 hostile casualties in Salah-ad-Din Province represent the third-highest provincial losses and nearly double those of each of the next nearest competitors, Diyala, Babil, and Ninawa, where insurgents have killed between 150 and 175. Basra, where British soldiers patrol, has cost the Coalition 113 lives to hostile means, ranking seventh on the list. The large casualty numbers of the seven most hostile provinces cover a land area of just over one half of the total of Iraq, of which half Anbar Province alone accounts for a majority of the land. Six of the seven most hostile provinces combine to form one connected land mass. Baghdad its the four adjacent provinces combine with Ninawa to the north of Salah-ad-din reveal the concentration of insurgent activity in the central, western and northwestern portion of Iraq. The eleven provinces with low casualty numbers – fewer than one hundred each in over four years' time – underscore the point that the eastern and southern sections of Iraq have experienced relatively little insurgent activity.

The total non-hostile casualty numbers compare with hostile losses in individual provinces on Table 5.1. The only province other than the seven most costly provinces that ever claimed the largest number of lives in a month was Dhi Qar, where the U.S. suffered 36 hostile losses in March 2003. The majority of these fell in a sharp few days' fighting in Nasiriyah, but those dead surpassed by a wide margin the combined total of hostile deaths in Dhi Qar since the completion of the initial invasion operation. Dhi Qar has twice completed an entire year with no hostile Coalition casualties and amassed a total toll of 60 dead from hostile causes over the entire course of the war to date. A second province that offered fairly stiff resistance to the Coalition early in the war but has declined in recent months is Ninawa, where hostile casualties peaked at 24 in November 2003 but have not surpassed 10 dead since December 2004. Strong insurgent activity during the fourteen months from late 2003 to the end of 2004 sufficed to rank the hostile death toll of Ninawa sixth overall, but clearly war-related violence has fallen into decline. To date, insurgents in Ninawa have not killed more than seven Coalition troops in one month since December 2004.

In November 2003, insurgent activity rapidly increased throughout Iraq, causing more than double the hostile losses of October. The largely Sunni Anbar Province became a great source of concern to the occupying troops, as insurgents took 21 lives, a number that surpassed all eight previous months combined. Insurgents in Anbar Province claimed a large number of Coalition lives over the following three years, five times equaling or surpassing 40 in one month. Simultaneously, as revealed in Table 5.2, "Non-Hostile Casualties in Iraq by Province," the non-hostile dead in Anbar also peaked as the Armed Forces, principally U. S. Marines, increased their numbers of troops and

activity in the area. The non-hostile casualties in Anbar reached their summit with the 34 losses of January 2005, of whom 31 died in a Chinook Helicopter crash. After this unusually large number, the non-hostile toll of Anbar Province fell to fewer than 10 deaths per month, and it has remained at this level. The non-hostile casualty numbers for Anbar and Baghdad usually surpassed those of the other provinces, but such trends simply reflected the numbers of troops deployed to each province. Later, as insurgent activity concentrated around Baghdad, the province surrounding the capital city began costing more lives than the larger Anbar Province on a regular basis.

The January 2005 Chinook crash in Anbar underscored another feature of non-hostile casualties, namely that a single disaster could alter the total losses of an entire month. In the case of January 2005, one tragic aircraft crash sufficed to raise non-hostile casualties for the entire province above the numbers of hostile losses for that month and to drive the total non-hostile losses of the coalition to historic highs. The 53 non-hostile deaths nationwide in that month stand as the current record, even though one aircraft crash accounted for well over half of the total. One helicopter crash in At-Tamim Province took 14 lives in August 2007, this accident accounted for half of the total non-hostile casualties for the month. The crash also inflicted more deaths than the military had suffered in At-Tamim from hostile forces during any previous six-month period of time. At times, therefore, non-hostile losses did not so much follow trends as reflect scattered catastrophic incidents. The occasional fall of non-hostile losses often depended relatively little on individual units conducting safer operations. Rather, the toll often revealed how large the individual deadly accidents were. A few months without a

catastrophe could cause a decline in non-hostile casualties nationwide as surely as a helicopter in Anbar or At-Tamim could inflate the numbers.

The Marines stationed in Anbar Province, home of Fallujah and Ramadi, two of the most hostile cities in Iraq, pioneered a number of civil affairs techniques. As General Petraeus took command of the Coalition, the Marines had already gained the cooperation of local tribal leaders in fighting against the largely foreign forces of Al Qaeda in Iraq. The six-month period from March to August 2007, in which insurgents killed 72 servicemen, was the least costly to the Coalition in Anbar since the first six months of 2004. This sum, the third-lowest number of hostile casualties for a six-month period, reflects marked improvement since the peak in Anbar's casualties at over 200 in the latter half of 2004. To date, the hostile casualties of Anbar have fallen additionally to six in September and only two in October 2007, two months which rank among the least costly on record. From January 2004 until August 2007, the casualties in Anbar Province surpassed those of Ninawa, Babil, Diyala and Salah-ad-Din every single month. Within the last two months, each of these provinces has surpassed Anbar at least once in hostile casualties, although the smaller provinces have not observed marked increases in insurgent activity. The major decrease in enemy activity in Anbar is entirely responsible for the change in Anbar's status from the most dangerous place in Iraq to the third- and fifth-most dangerous province respectively over the last two months. Considering how large Anbar province is, this progress is clearly significant.

The Marines' progress in Anbar Province preceded the "surge" in troops that General Petraeus executed in 2007. Petraeus' command began after the departure of General George Casey and Defense Secretary Donald Rumsfeld near the end of 2006.

Casey and Rumsfeld had employed the strategy of pacifying Iraq and supporting the Iraqi police while allowing some bastions of militia activity to remain. Petraeus assumed command specifically to curtail such rogue actors as Muqtada al Sadr, whose Shiite militias had caused the Coalition a great deal of trouble in the region south of Baghdad. Although the militias had killed few Coalition soldiers, they had perpetrated a large number of acts of sectarian violence that hurt the Coalition's overall mission. Petraeus' plan involved diverting a number of troops from the less dangerous provinces to Baghdad in response to the increases in violence there.

All provinces in Iraq except Basra and the cluster of Baghdad, Babil, and Diyala had declined in casualties in the early months of 2007. Of the seven costliest provinces, Ninawa, which does not connect with Baghdad, was completing a two-year term of insignificance where hostile casualties were concerned. The clear trend of the insurgency showed violence centering on Baghdad and dwindling everywhere else except Basrah. Salah-ad-Din's casualty numbers stood below the losses of 2004, so one cluster of three provinces and Basra presented the only places where casualties were on the rise. In early 2007, the British Armed Forces had begun moving out of Basra in the far southeast of Iraq. The declining numbers of occupying troops there or a greater influx of Iranian fighters from across the border might have accounted for the increase in insurgent activity. The rising British losses in 2007 caused Basra to emerge as a larger concern than it had ever represented before. After its worst six-month period on record from March through August 2007, Baghdad has experienced a marked decline over the last seven months. Only the passage of time will reveal whether the forces deployed in Baghdad will be able to sustain this decline in hostile losses.

The trends in overall non-hostile casualties over the course of Operation Iraqi Freedom reflect similar patterns to those of the non-hostile losses of Operation Desert Storm. During Desert Storm, the vast majority of non-hostile losses occurred when the Armed Forces were executing the massive flank attack in the hundred-hour ground offensive of early 1991. Vehicle accidents claimed a significant number of lives among the non-hostile casualties of Desert Storm. Comparably, the Coalition in Iraq suffered its greatest numbers of non-hostile casualties in the early months of the invasion and occupation of Iraq in 2003. In seven of the first eight and eight of the first ten months of the invasion and occupation, the total non-hostile casualties in Iraq surpassed those of the hostile deaths in the most costly province.

After the initial high death toll of 123 in six months from non-hostile causes, the rate decreased until its second spike at 122 in the six months from September 2004 through February 2005. For the second spike in non-hostile deaths, one could trace most of the blame to the large Chinook crash in Anbar in January of 2005. With the exception of these two spikes and the record-low 47 deaths in March-August 2006, non-hostile losses have stood between 60 and 85 per six-month period. For the most part, non-hostile numbers tend to follow the number of troops deployed, with the occasional catastrophic accident or lack thereof causing increases and declines. The “surge” of early 2007 brought with it additional troops and moderate increases in non-hostile losses.

Ironically, the policy of counting hostile and non-hostile casualties equally caused an apparent improvement in the situation in Iraq in 2005 and the first half of 2006. Although the hostile losses of those two years had not declined markedly, the non-hostile casualties fortuitously reached all-time lows in the absence of any large aircraft crashes.

Lower non-hostile rates of casualties translated into lower overall losses. The periods from March to August 2005 and from March to August 2006 revealed six-month declines over the previous six-month periods each year. The Coalition lost 556 personnel from September 2004 to February 2005, but that figure fell to 405 in the period from March to August 2005. Likewise, the 427 losses of September 2005 to February 2006 fell to 370 in the period from March to August 2006. These declines suggested a significant decrease in enemy activity. Actually, the total non-hostile losses of these two periods had declined very sharply from 122 to 65 in the first two periods and from 82 to 47 for the latter times.

Thus, improvements in safety practices and a dearth of major accidents created the illusion that insurgent activity had declined, when actually it had continued at the same rate. An increase in insurgent activity in the last few months of 2006 and the early days of 2007 restored Coalition casualty numbers to levels comparable to those of 2004, but for a short time the Coalition had appeared to make significant progress against the insurgency. Statisticians reporting on the war effort observed major declines in Coalition losses, but most of these had actually resulted from such mundane things as improved airport conditions and the enforcement of safety-related policies such as seatbelt and helmet use for all soldiers riding in vehicles. The decline in casualties in the late months of 2007, by contrast, happened despite moderate increases in non-hostile deaths. As long as the Coalition Armed Forces remain at strengths between 150,000 and 160,000, the non-hostile toll on troops will likely remain between 60 and 85 lives every six months.

Of all of the lessons from Desert Storm that the American soldiers and their commanders hoped to put to good use, few held such a prominent place as prevention of

fratricide. Although the Armed Forces had adopted a policy designed to conceal fratricide losses from the public, the fratricide losses of Desert Storm made a significant impact in the planning for Operation Iraqi Freedom. The Generals took steps to correct both the policies for reporting and techniques for preventing the Coalition from killing its own soldiers. The battle for Khafji, the first skirmish of Operation Desert Storm in January 1991, had yielded excellent stories of Marine valor in the face of attacking Iraqis. Sadly, subsequent reports had revealed that all 11 Marines killed at Khafji had fallen victim to misdirected friendly fire from the air. At the outset of Operation Iraqi Freedom, the spokesmen for the Armed Forces spoke of a “shock and awe” campaign that would rain destruction upon the Iraqis from artillery and air power. Although weapon lethality from air platforms had improved since Desert Storm, the ground forces in 2003 often pressed ahead with their advance and sometimes did not wait for artillery and close air support to overtake them. Arranging for fire missions from artillery or aircraft always consumes time while the observer on the ground confirms his location and the grid location of the suspected enemy forces. If friendly units face minimal enemy resistance, they advance so as to maintain their forward momentum without halting to arrange for fire support.

The American Armed Forces had improved their doctrines considerably since the Vietnam War, when fire support formed a large part of the strategy by which infantry operated. The open terrain of Iraq and the superior ground fire power of the American Armed Forces lessened the dependency of the Army on fire support. The M1A1 tanks and the Bradley Fighting Vehicles that the Americans employed to good effect demolished the Iraqi defenses arrayed to halt the Coalition. In one example of superior

ground fire power, a Bradley Vehicle destroyed a Soviet-made T-72 tank with 25mm shells that had never before achieved a “kill” on a main battle tank.⁵ Better weapons, better training, and determined execution of the invasion plan enabled the Coalition to carry out the vast majority of its missions without fire support of any kind. This trend resulted in fewer incidents of friendly fire, as fire support had always caused the largest number of fratricide casualties.

Moreover, in early 2003, the Iraqi Army had not massed its divisions on the border with Saudi Arabia, where they had been disposed at the beginning of Desert Storm. Saddam Hussein had instead concentrated his forces for the most part in cities, hoping to ensnare the Americans in street fighting. The strategy bore fruit in only one place, when the Marines fought a hard battle in Nasiriyah in March 2003, and lost 36 men. The most famous and reportedly the most costly instance of friendly fire occurred during the pitched battle for Nasiriyah. For the one time that Iraqi and Coalition forces did what Saddam Hussein had hoped each would do, they inflicted a toll equivalent to about one infantry platoon and delayed the Americans’ advance in their sector for one day. With that exception, the Iraqi Army fought only briefly before fleeing the battlefield and dispersing among the civilian populace.

The journalists and historians who have written about the Nasiriyah friendly fire incident on March 23, 2003, differ as to how many casualties occurred. An A-10 Thunderbolt jet aircraft flew at least one sortie over friendly troops, firing 30mm mini-gun rounds into the Marines as they advanced toward the town. Evan Wright, an embedded reporter with the USMC First Recon Battalion, occupied the position nearest

⁵ Walter C. Rodgers, *Sleeping with Custer and the 7th Cavalry* (Carbondale, IL: Southern Illinois University Press, 2005), 152.

the action when it happened. The story that reached his position through the Marine chain of command reported as many as ten friendly troops killed. Rick Atkinson, a journalist embedded with the command section of the 101st Airborne Division, recorded, “half a dozen” Marines killed by friendly fire in Nasiriyah. John Keegan, a well-known British military historian, recorded at least one Marine wounded by the A-10’s strafing run.⁶ This number proved difficult for any recorders to substantiate because Iraqi fire inflicted additional casualties almost simultaneously. The entire crew of an armored vehicle died while under a mixture of friendly and enemy fire as the A-10 completed its sortie. Any number of the nine soldiers who were killed in the vehicle might have died from either enemy or friendly fire. Barring a precise examination of each victim’s wounds, a certain conclusion as to which fire killed which Marine could prove illusory. The Department of Defense reported all thirty-six men killed in Nasiriyah as hostile casualties of enemy fire.

In the case of friendly fire in Nasiriyah, the DOD might have appeared to conceal an instance of fratricide, but at the same time the DOD was reporting other cases of fratricide accurately. Perhaps the most significant policy improvement that the DOD made over Desert Storm in the area of non-hostile casualties concerned its reporting system for fratricide cases. During Operation Desert Storm, the DOD completed formal investigations of fratricide incidents before reporting fratricide as the soldiers’ causes of death. In the meantime, families learned erroneously that their relatives had died from enemy fire and suffered a shocking realization months after the war had ended when the DOD reported the truth. Unlike the Desert Storm policy, the DOD during Operation Iraqi

⁶ John Keegan, *The Iraq War* (New York: Vintage Books, 2005), 150.
Rick Atkinson, *In the Company of Soldiers* (New York: Henry Holt and Co., 2004), 147.
Evan Wright, *Generation Kill* (New York: Berkeley Caliber, 2004), 80.

Freedom reported fratricide victims as such to their families immediately and announced that the chain of command had commenced formal investigations for assessments of guilt. In the month of March 2003, the DOD reported nine soldiers killed in fratricide incidents, including six British soldiers and three Americans.

In April 2003, the DOD added an additional six Americans to the fratricide ledger, including the name of Captain Edward J. Korn, whose own unit killed him during a clash with Iraqi infantry and a tank. Korn's death came in a firefight with enemy forces, when the Captain left his vehicle and got into the middle of a cross fire. The chain of command of his unit could plausibly have recorded Korn's death as the result of enemy fire, but chose to file an honest report instead. On a later date, soldiers of the 1st Battalion 506th Infantry of the 101st Airborne Division reported a fratricide episode to troops in the 1st Battalion, 108th Armor, whom they had replaced in Mahmudiyah. On November 4, 2005, two American convoys approached one another during the night and failed to establish proper identification. After allegedly firing warning shots, one of the convoys opened fire with an M2 .50 caliber machine gun and killed Staff Sergeant Jason Fegler of C Company 1st Battalion 506th Infantry. The DOD reported his death from fratricide accurately as well.

To date, the DOD has reported 21 cases of fratricide officially, including a total of 9 soldiers from nations other than the United States. The 21 fratricide deaths reported over a period of 55 months are similar in quantity to the number of fratricide casualties of the much-shorter Operation Desert Storm. At all levels of the chain of command, the Armed Forces performed a better service to the families of fratricide victims during Operation Iraqi Freedom than they had provided during Operation Desert Storm. The

Marines who died from fratricide in Nasiriyah and the fratricide death of Pat Tillman in Afghanistan appear to represent exceptional rather than typical cases.

For a number of reasons, environmental, tactical, and strategic, the Armed Forces have decreased the rates of fratricide in Operation Iraqi Freedom (OIF) considerably when compared with previous wars. In the Korean War, poor communication techniques between air and ground units at times resulted in fratricide as the UN forces retreated in the face of North Korean and Chinese advances. The environment of panic and desperation created in these retreats contributed principally to the hundreds of friendly soldiers that American pilots targeted mistakenly. The Air Force improved its air-to-ground fire training considerably during the Vietnam era and achieved a low rate of friendly fire in the jungles of Southeast Asia. The new smart weaponry of the late twentieth century forced the Air Force to re-learn a number of the lessons from the Korean War, as air-to-ground missiles caused a plurality of the friendly fire in Operation Desert Storm. Just as Korea had revealed the need for better training to the Vietnam-era Air Force, so did Desert Storm serve as the dress rehearsal for Operation Iraqi Freedom. During OIF, American forces have trained well for the conditions under which they fight and have not suffered fratricide casualties as great as those of Operation Desert Storm. Since Vietnam and Desert Storm, the improvement of realistic training has saved many lives.

At the tactical level, the ground forces during OIF significantly reduced their reliance on fire support from the levels of ground forces in the Vietnam War and Desert Storm. Strategically, the ground units in OIF benefited over those of Vietnam and Desert Storm because they sought principally to take land rather than to destroy the enemy

elements arrayed against them. In Desert Storm, the strategists emphasized destruction of the Republican Guard and the defeat of the other Iraqi divisions occupying Kuwait. In Vietnam, the entire American strategy consisted in the destruction of NLF and PAVN troops in South Vietnam. The tactical superiority, speed, and lethality of the ground forces in OIF enabled them to seize land quickly at extremely low costs in casualties and reduced the importance of fire support to the campaign. The decline in the employment of fire support and improved fire support training brought with them a decline in the rate of fratricide throughout OIF.

For a number of reasons, non-hostile casualties surpassed the hostile losses of every individual province for seven of the first eight months of the war and eight of the first ten. Not only did this trend result from relatively small numbers of hostile casualties, but also the non-hostile losses accumulated at higher-than-average levels in a few categories. The rapid deployment and occupation of Iraq taxed the soldiers as they attempted to acclimate to the environment of the Middle East. The Coalition lost 22 personnel to illnesses during the first six months, a number that peaked at eleven for the month of August 2003. No other full year's worth of illnesses has taken such a toll as the period of these first six months.

Accidents involving weapons operations and ordnance malfunctions also peaked in the first six months. Weapons and ordnance accidents claimed more lives in the first year of the occupation than in the remainder of the occupation combined. Predictably, eleven of the 33 fatal ordnance and weapons accidents of the first six months happened in April 2003. At this time, the soldiers were adjusting to a lower-intensity environment than they had experienced during the invasion. The mental and physical stresses that the

soldiers had endured throughout the invasion and the battles for control of Iraq remained for a time. Evan Wright reported one Marine shooting himself in his sleep and two others using firearms to threaten or commit violence in fits of hysteria.⁷ The high numbers of deaths from illness and weapons accidents caused the uncharacteristically high death toll of the first six months of the invasion.

Vehicle accidents claimed a slightly above average 39 lives in this period, including 13 in May 2003, a sum never surpassed in any other month. Aircraft crashes in non-hostile conditions took a moderate 13 Coalition lives in the first six months. As the soldiers adapted to unfamiliar electrical configurations of their newly-constructed bases, electrocution claimed eight lives between March 2003 and February 2005. No service member has died from electrocution since that time. Finally, drowning claimed an unusually large number of Coalition lives early in the occupation. Five troops died in the first six months and ten in the first year, out of a total of seventeen drowning deaths reported to date by the DOD.

In all of these major areas of unusually high losses early in the occupation, the major cause of high casualty numbers related in some way to the troops' adjustment to the theater of operations and the mission. The climate and local diseases contributed materially to increased illness deaths until American medical assets could establish effective treatment facilities. In time the soldiers learned how to operate in terrain so dominated by irrigation canals in some areas that mounted elements could only operate on roads.

As the invasion transpired, 16 journalists lost their lives alongside the soldiers whose experiences they sought to report. In a way that soldiers sometimes failed to

⁷ Ibid., 266, 352.

understand, the embedded reporters had anticipated and prepared for the invasion as surely as had they. The preparations took different forms and the training consisted of different steps, but the reporters showed extremely high motivation to go into the dangerous areas where the soldiers carried out their missions and cover the action armed only with cameras and body armor. The motivation that strengthened the embedded reporters' resolve bore a price for some of them who died of ailments from which they might have recovered had they sought treatment. The importance of battlefield stories to advancing the reporters' careers surpassed considerations of their own health and safety, fatally so in some cases.⁸

After the first six months, and especially after the first year, non-hostile losses reached relative stability in nearly all areas. The leading non-hostile cause of deaths has been ground vehicle accidents, claiming over 30 lives in a six-month period regularly. In the first 36 months, the vehicle accident toll surpassed 30 five times, exceeded 50 once, and fell below 30, to 27, once. In more recent months, the reported rate of vehicle accident deaths has declined for a number of possible reasons. Since the beginning of 2006, the DOD has increased the number of soldiers whose causes of death it reports simply as non-hostile incidents. Each news release continues that the incident is under investigation, but does not give a hint as to the cause of death. The Coalition has not grown smaller in the last eighteen months, but the number of vehicle accident deaths has fallen to fewer than twenty reported per six months. Some units can credit strict enforcement of traffic laws, and the use of seat belts and helmet for this decline, but some

⁸ Walter C. Rodgers, *Sleeping with Custer and the 7th Cavalry* (Carbondale, IL: Southern Illinois University Press, 2005), 5-6.
Rick Atkinson, *In the Company of Soldiers* (New York: Henry Holt and Co., 2004), 41-42.

of the deaths are likely the result of vehicle accidents. The unknown cause category of non-hostile deaths is one weakness of the icasualties.org database.

The DOD has reported a total of 120 soldiers who died in non-hostile aircraft crashes, losses that averaged roughly two per month and 12 in six months. Aircraft crashes tend to occur rarely and inflict catastrophic losses, however, so the various six-month periods of the war have featured aircraft crash losses as low as three and as high as forty. The last large crash to date occurred in August 2007, when 14 soldiers died in one helicopter crash. Thus, the six-month period to which that month belonged lost a higher-than-average 23 troops, but a single incident accounted for over half of the losses. In a given six months, up to ten Coalition soldiers have typically died from ordnance or weapons operation accidents. Only three have died from this cause within the last year and seven over the last eighteen months, so the rate of weapons accidents may be in decline or some ordnance and weapons accident deaths may be under official investigation.

The invasion and occupation campaigns in Iraq have cost a total of 4,145 Coalition lives, of which 768 died in non-hostile events. In “these kinds of wars” – those fought from the Korean War onward – every casualty counts equally as a part of the cost of the operation. Mounting costs in duration of the conflict and numbers of lost lives lead to civilian dissatisfaction and political baggage for the current presidential administration. In the present case, therefore, the 768 non-hostile coalition casualties have enabled the news media to report new milestones in casualty losses at an earlier date than they would have had they only counted hostile losses. Both the public view of the war and American military leaders experienced consequences from rising casualty figures.

The commanders of the Armed Forces recognized an interest in minimizing coalition casualties so that their civilian leaders would continue supporting the mission of the forces that they commanded. The numbers of service personnel, the cost in lives, and the duration of the conflict all weigh heavily with civilian and military leaders in the campaigns of attrition since Korea, “these kinds of wars.” The flag officers in the Pentagon had acknowledged the changes in policy augured by the arrival of Donald Rumsfeld as the new Secretary of Defense. In almost every way conceivable, Operation Iraqi Freedom was Secretary Rumsfeld’s war. He had determined what size force the Armed Forces would employ, and he displayed a certain almost-adversarial attitude toward the Army, regarding it as behind the times and slow. As the largest and least-specialized branch, the Army by nature adapts more slowly to changes in technology and new missions than do her sister services.

Secretary Rumsfeld championed a smaller, lighter force in the Army and confronted an Army Chief of Staff, General Eric Shinseki, whose sentiments matched his exactly. Shinseki had learned from the Bosnia and Kosovo campaigns the need for Army units equipped with lighter and more mobile armored vehicles than their 68-ton M1A1 tanks. He recommended wheeled armored vehicles similar to the Marines’ LAV vehicles, addressing the need for light-weight armored personnel carriers. Thus, the idea for the Stryker program had taken shape a full year before Secretary Rumsfeld assumed his office. Even as the Chief of Staff discussed lighter forces, the Field Artillery Branch had begun developing a giant new howitzer called the Crusader to replace the Paladin. In keeping with his goals of lighter weaponry, the Secretary cancelled the Crusader

program. The Army would be lighter and more agile, which appeared to be General Shinseki's brainchild as well as Rumsfeld's.

The conduct of Operation Iraqi Freedom featured a famous standoff between Rumsfeld and his Generals reminiscent on a smaller scale of Secretary McNamara's dealings with the Joint Chiefs of Staff (JCS) in the early 1960s. McNamara wanted to conduct a completely new kind of war based on data analysis that his Generals assured him would fail. Rumsfeld's dispute with Shinseki occurred only over the size of the forces that the United States should use. Rumsfeld had determined that a combat force of roughly 200,000 troops could take Iraq, whereas General Shinseki had designed an invasion using nearly twice that number. Rumsfeld maintained that his smaller force could do the job of capturing Baghdad, to which Shinseki retorted that such a force could take Iraq but could not hold it. Upon General Shinseki's encouraged retirement, Secretary Rumsfeld pulled General Peter Schoomaker out of retirement to serve as Army Chief of Staff to run the Army in the early days of Operation Iraqi Freedom.⁹

Both of these positions reflected the protagonists' concern over costs, but in different ways. Rumsfeld wanted to minimize the size of the force deployed whereas Shinseki sought to minimize the duration of the campaign. Each probably thought that his prescribed strategy would minimize the costs in casualties. The remarkably swift conquest of Baghdad and the entire country of Iraq in March and April 2003 vindicated Rumsfeld's claim that a smaller force could take Iraq, but Shinseki's caveat remained unaddressed. Four years into the campaign in Iraq, General Shinseki appears to have been right about the higher troop numbers necessary to hold the territory. The task of "winning the peace" by pacifying and securing the country so as to provide a safe

⁹ Ibid., 67-68.

environment for a democratic government remained a daunting task. Ambassador L. Paul Bremer recorded that one of his first questions to President Bush upon his appointment as the interim supreme authority in Iraq concerned troop levels. Even in May 2003, the State Department and military leaders on the ground had already developed a consensus that the United States would need more troops to secure the country. President Bush replied that he planned to add more troops from new UN-member countries that he hoped to bring into the Coalition. His “major military operations complete” speech on May 1, 2003, then, served the principal purpose of inviting new allies to the Coalition.¹⁰

President Bush’s speech on the aircraft carrier on that day signaled the major diplomatic failure of the occupation. The Americans had completed the conquest of Iraq and needed only to secure the country against insurgency and sabotage of the civil and religious infrastructure. President Bush recognized the need for additional troops, but the allies he had hoped to gain did not appear. From May 2003 until the end of 2006, the Coalition carried out its missions in Iraq with fewer troops than the Generals wanted, and the situation regarding casualties did not improve. The Spanish elections following the al Qaeda bombing of Madrid on July 7, 2004, brought to power a candidate who had promised to remove all Spanish troops from Iraq instantly. Shortly thereafter, the already admittedly too small Coalition lost an ally.¹¹ After a peak in casualties in 2004, Coalition losses declined gradually until a rise in losses immediately before the 2006 Congressional elections in the United States.

¹⁰ L. Paul Bremer, *My Year in Iraq: the Struggle to Build a Future of Hope* (New York: Simon and Schuster, 2006), 7, 12.

¹¹ *Ibid.*, 284, 312, 324.

The president and Secretary Rumsfeld had always warned the American people that the occupation of Iraq would prove long and difficult, but in late 2006 the situation had not improved markedly in three years, and, according to casualty numbers, it was growing worse. The Republican defeats in both chambers of Congress in the 2006 elections prompted President Bush to replace Donald Rumsfeld as Secretary of Defense and adopt a new strategy. General Petraeus replaced General Casey as overall Coalition Commander in Iraq, bringing with him a reputation as the best counterinsurgency general in the Army. Petraeus proposed an increase in troop numbers, referred to as a troop “surge,” to focus more troops in Baghdad and other key places in Iraq. President Bush’s change in strategy, coming as it did directly after political defeats for his party, appeared more a political than a strategic decision. Judging from the situation in Iraq and his admittance of the need for more troops as long as three years earlier, it seems fair to say that he should have required a new strategy, committed more troops, or replaced Secretary Rumsfeld at an earlier date.

Petraeus confronted the mission of reducing U.S. casualties promptly and presenting tangible progress on the military front. Significantly, the new strategy reversed previous decisions to allow certain political parties to maintain their militias. In April 2004, the simultaneous Battle for Fallujah and the Muqtada al Sadr uprising threatened the government that the Iraqis were trying to formulate. Sunni ministers opposed strict measures in Fallujah, and Shia ministers recommended negotiations with Muqtada al Sadr. The United States made certain concessions on both fronts so as to preserve the possibility of political progress.¹² Soldiers on the ground expressed hearty

¹² Ibid., 335-342.

dissatisfaction with the political leaders who allowed Muqtada's Mahdi Militia to retain their arms. Petraeus' plan targeted militias like the Mahdis.

By the end of 2007, when the surge had taken full effect, the casualty numbers in Baghdad had fallen from 57 in both May and June to fewer than 20 in both September and October. In November and December, hostile deaths in Baghdad fell below ten in both months. This represented the first time that insurgents in Baghdad had inflicted so few deaths for two consecutive months since the early months of 2004. General Petraeus proposed troop reductions in the early months of 2008 to correspond with the growth in stability throughout Iraq. Only time will reveal whether his command succeeded in stabilizing Iraq.

Other than troop number debates and overall strategy issues, the military high command addressed specifically non-hostile casualties with a number of regulations and technological advances. In addition to the typical directives about wearing seatbelts and helmets in vehicles, the Armed Forces have completed a few innovations in combating fratricide. One top priority concerned preventing fratricide during missions at night. At least three pieces of technology and one tactical standard operating procedure played roles in reducing the risk of fratricide. Convoys traveling at night carried IR Chem-light sticks attached to the antennae of their HMMWV (HUM-V) vehicles. The IR Chem-lights were invisible to the naked eye, but fellow Coalition soldiers with night vision capabilities could see and easily identify friendly vehicles. In some cases, they also used regular orange Chem-lights for night identification. Soldiers also attached small infrared strobe devices to their vehicles' antennae that flashed IR light.

Both the IR Chem-lights and IR strobes proved most effective in enabling soldiers to establish identification when the vehicles did not have their headlights on. Driving with the aid of night vision devices, soldiers kept their vehicles' small "black-out drive" lights on and easily identified one another in the dark, as other convoys could see their IR strobes and Chem-lights. In one situation on November 4, 2005, two convoys met head-on, headlights ablaze, and did not establish identification. One convoy fired warning shots and killed SSG Jason Fegler of C Company 1st Battalion 506th Infantry. This incident happened in the same area of operations where B Company 1/108th Armor had used "black-out drive" lights only, and never suffered a friendly fire incident in five months. C Company 1/506th Infantry had been operating less than one month when their soldiers re-learned a lesson in fratricide prevention the hard way.

The high chain of command stressed education as a tool against fratricide as well. Camp Buehring, Kuwait, served as the first port of call in the Middle East for the majority of Army units arriving to commence their one-year tours of duty in Iraq. A week of training in Camp Buehring consisted of final weapons checks and inspections and some theater-specific briefings. On May 13, 2005, a British Corporal briefed a large assembly of soldiers from the 48th Brigade of the Georgia National Guard on fratricide prevention. The briefing included photographs of friendly vehicles and distinctive markings intended to assist the soldiers in identifying friendly forces. The presentation also included statistics about twelve fratricide episodes involving different Coalition countries. In almost every instance, American soldiers had fired the shots that wounded or killed their allies. The Camp Commander had hoped by using a British soldier as a presenter to increase the inter-Coalition awareness of the American soldiers. The theater-

level chain of command mandated that every American unit conduct the identical fratricide prevention briefing every six months. Thus, the Coalition forces of Operation Iraqi Freedom incorporated fratricide prevention training into their regular regimen of instruction. According to the icasualties.org database, no soldiers have died in inter-Coalition fratricide episodes since March 2005. The education program appears to have taken good effect.

The casualties of Iraq play a significant role in the public consideration of the war because Operation Iraqi Freedom has become a war of attrition. As has been the case since the Korean War, the public expresses limited approval for an attrition war according to time, costs in soldiers, and the perception of military and political progress. The American public desires news of political and military progress in Iraq, falling casualty numbers – both hostile and non-hostile – and plans for the return home of troops as soon as is practical. General Petraeus confronted the problem in 2006 that the war had stagnated, with no improvements in casualty numbers and extremely minimal political progress.

Throughout the campaign in Iraq, the specter of Vietnam has affected nearly every discussion in topics of strategy, tactics, and civil affairs. Military and civilian leaders attempt to discover whether or not the United States has learned the lessons of Vietnam in its conduct of the war. The reports from the embedded reporters during the invasion in 2003 provided a nearly unanimous vote of confidence in favor of the American soldiers. Walter Rodgers, who rode to Baghdad with the 7th Cavalry, called the American treatment of civilians “exemplary.” He avoided too sympathetic a view of the troops, casting doubt on one story of American soldiers aiding a wounded civilian, but

also reported the commander of his unit canceling an air raid because Saddam Hussein's soldiers were using civilians as human shields. The soldiers chose to allow enemy troops to escape rather than risk killing civilians.¹³ In cases like this one, the leaders of the Armed Forces recognized that they might gain a small tactical advantage by ordering aerial and artillery fire. On the other hand, they might suffer a major blow in public relations if the enemy publicized pictures of dead civilians.

Evan Wright reported similar patterns of activity in the USMC First Recon Battalion. When the enemy soldiers used civilians as human shields, the Marines invariably held their fire. The major challenge that they faced with civilian deaths concerned their own security. The Fedayeen Saddam, a fanatical militia group that did not wear uniforms, employed flags of truce that they did not honor and sometimes attacked American positions with cars rigged with explosives. After firing warning shots at vehicles approaching their positions, the Americans engaged with rifles and machine guns if the cars refused to stop or accelerated. Some unarmed Iraqi civilians refused to respond to the warning shots, tried to break through the barricades, and Marines either disabled their cars or wounded or killed them. In time, even after the Marines had destroyed a suicide car bomb en route to their position, the Marines grew tired of shooting at civilians and adopted a new tactic. Instead of shooting bullets, the Marines began firing smoke grenades in front of the vehicles and more of the Iraqi civilians cooperated by dispersing.¹⁴

The trick of using American sympathy for civilians as a weapon is not a new one. In Somalia, the militiamen in Mogadishu used women and children to point out American

¹³ Walter C. Rodgers, *Sleeping with Custer and the 7th Cavalry* (Carbondale, IL: Southern Illinois University Press, 2005), 45, 68.

¹⁴ Evan Wright, *Generation Kill* (New York: Berkeley Caliber, 2004), 259.

positions and as human shields for gunmen. American soldiers who refused to shoot unarmed women and children risked exposure to enemy fire. Only the humane sympathy of the American soldiers saved the spotters from death in that situation. Instead of using lethal force, the Rangers usually threw “flash-bang” hand grenades that made noise but jettisoned no shrapnel.¹⁵ A Rules of Engagement (ROE) card for the 101st Airborne Division, which each soldier carried in March 2003, outlined this precise situation and specified the combatant status of any person giving direct aid to the enemy in the heat of battle. Rick Atkinson, who had embedded with the 101st Airborne for the invasion, drew attention to an ROE policy that instructed American soldiers to shoot “unarmed civilians.” Even when the people in question were in the process of giving direct aid to the enemy, Atkinson maintained his ideal that Americans should kill no unarmed people.¹⁶

In a few cases, stories of atrocities by American soldiers have affected the public perception of the war effort in minor degrees. Dr. Les Roberts of Johns Hopkins University released a study that suggested American troops had killed 100,000 Iraqi civilians during the first nineteen months of occupation. The Johns Hopkins researchers examined three major areas, asking the people whom they encountered how many civilians the American Armed Forces had killed in their areas. By conducting two thirds of their surveys in Fallujah, the most embattled city in Iraq in 2004, the framers of the study examined a sample that did not represent the vast majority of the country. The accumulated data placed the number of civilian casualties somewhere between 8,000 and 194,000, which is, by any standard, an enormous margin of error. Moreover, the study

¹⁵ Mark Bowden, *Black Hawk Down* (New York: Penguin Group, 1999), 38, 46.

¹⁶ Rick Atkinson, *In the Company of Soldiers* (New York: Henry Holt and Co., 2004), 46.

relied on the word of random Iraqi people without comparing the reports against official death records. Roberts admitted that he hoped to influence public opinion against the war in Iraq, but his number of civilian deaths was so high as to defy the credulity of his audience.¹⁷

On November 19, 2005, American Marines in Haditha, Iraq, cleared and searched several houses after an IED killed one of their comrades. Marines claimed that they had received hostile fire from the houses, but Iraqi reports contradicted them. In the course of clearing the houses with grenades and firearms, the Marines killed 24 Iraqis, all of whom appeared to be civilians. The Commanders of the Marines began an investigation and prosecuted the troops involved. The Marines responsible for the 24 dead civilians faced courts martial and imprisonment.¹⁸ Months later, a squad of soldiers from the 101st Airborne Division raped and murdered an Iraqi girl in Mahmudiyah, murdering her family to cover the crime. One of their number reported the incident and official court martial proceedings followed. Both events happened on a small scale, and the perpetrators paid penalties promptly without an official cover-up.

To date, U.S. troops in Iraq have conducted their missions honorably enough that the public maintains a positive attitude toward them. The public and the political leaders of both major parties have maintained positive attitudes toward the individual troops who have fought the war in Iraq. Politicians, who have criticized the Bush Administration and opposed its policies, have taken pains to express their respect for the troops who serve in harm's way. Organizations such as the Freedom Alliance and the Marine Corps Armed

¹⁷ Richard Minter, *Disinformation: 22 Myths that Undermine the War on Terror* (Washington, DC: Regnery Publishing, 2005), 89-92.

¹⁸ Wilfried Mausbach, "Forlorn Superpower: European Reactions to the American Wars in Vietnam and Iraq," in *Iraq and the Lessons of Vietnam*, ed. Lloyd Gardner and Marilyn Young (New York and London: The New Press, 2007), 83.

Forces Foundation amassed funds to pay for the college education of children of soldiers killed in the line of duty. Sea World, among other attractions, granted free admission to veterans and their families. One television commercial showed American servicemen disembarking an airplane in the United States. The civilians in the scene began an impromptu round of applause for the soldiers and the Anheuser-Busch Company offered thanks to the soldiers. Throughout Operation Iraqi Freedom, the public has hoped for as few casualties as possible, and as short an operation as possible. To the extent that General Petraeus and the Generals of the future succeed in minimizing casualties, the public will likely tolerate a continued U.S. military presence in Iraq. Should the Iraqi government stabilize the country and establish Iraq as an ally to the U.S. in the region, the public may in time view Operation Iraqi Freedom as a success. Should the country descend into civil war, the American public will deem the operation a failure.

The lessons of Operation Iraqi Freedom will inform the American civilian and military leaders materially as they wage the next war. Already American soldiers are training Ethiopians and Filipinos to fight proxy wars against belligerents with links to Al Qaeda in Somalia and the Philippines. These campaigns achieved ideal results in that very few American troops deployed to the area, none died, and the operations cost very little money while serving vital U.S. interests. The future presidents of the United States will not likely emulate the strategy of pre-emptive war to affect regime change in a country like Iraq that does not have an apparent leader of the opposition available. To complicate matters, Iraq also has multiple religious and ethnic groups that have seldom lived at peace with one another. Instead, they will supply training, funds and arms to the

allies of the U.S., to groups that they hope to make into allies, or to the enemies of America's enemies.

Militarily, Operation Iraqi Freedom has proved that the American soldiers are the best trained and most formidable of any in the world. The rapid victory in open terrain in Operation Desert Storm had given way only two years later to the debacle in Mogadishu, Somalia. Somalia had taught the lesson that perhaps American soldiers could not prevail in urban terrain. Saddam Hussein had sought to prepare an urban war in March 2003, but his forces suffered decisive defeat. In the years of occupation, the U.S. Armed Forces have adapted their training to the changing situation on the ground and countered the insurgency with some degree of success. It is unlikely for the foreseeable future that any enemy will fight a conventional war against the United States. Insurgency, sabotage, and proxy combat of the sort that Iran has carried out in Iraq will characterize future operations against the United States.

The experiences of the Korean War, the Vietnam War, Operation Desert Storm and Operation Iraqi Freedom have taught a few definite lessons about public approval for wars. The public will evaluate attrition wars based on length in time, cost in lives, apparent progress, and American conduct. Operation Iraqi Freedom has experienced extremes of opinion, positive and negative, based on these factors. The easy invasion and low casualty numbers of 2003 gave way to increasing casualties in 2004. The successful elections and government formation of 2005 yielded to political in-fighting and the killings in Haditha and Mahmudiyah. The passage of time took a toll in 2006, when casualty numbers began to increase having not declined significantly in three years. The

surge of 2007 appears to have exerted the desired impact on the military situation, but the fortunes of war will likely change again.

There is one other possibility, as well: the next war may not be one of “these kinds of wars.” If an enemy attacks the United States on her home soil in an attack reminiscent of September 11, 2001, the president may enjoy a mandate for an operation similar to the fall 2001 campaign in Afghanistan, during which the military, political and public voices of America spoke in nearly complete unity. The public expressed a high tolerance for casualties in a campaign avenging a direct attack. At the time the next war begins, the president will decide whether the public perceives an imminent threat, as it did in 2001, or whether the conflict has the potential to become one of “these kinds of wars.” If the experiment in Iraq fails, American presidents and Defense Secretaries will take every precaution to avoid another attrition war. The successes and failures of the experiment in Iraq will impact many of the president’s decisions about the next war.

Table 5.1 shows the hostile casualties in each province, compared with the total non-hostile casualties of each month and divided in six-month increments. The most costly province of each month appears in bold print. Najaf and Karbala are combined because they are major centers of Shiite activity and provide an excellent contrast to the Sunni provinces.

Month	Anbar	Bagdad	Salah ad din	Ninawa	Babil	Diyala	Basra	Dhi Qar	Najaf/Karbala	Other	Unknown	Non-Hostile	Total	Foreign
Mar-03	0	1	0	0	1	0	23	36	4	14	3	10	92	27
Apr-03	3	27	3	0	0	0	3	0	0	11	6	27	80	6
May-03	3	2	1	0	1	0	0	0	0	1	0	33	41	4
Jun-03	2	8	4	0	2	0	0	0	1	6	1	12	36	6
Jul-03	2	12	0	6	2	5	0	0	0	1	0	21	49	1
Aug-03	2	7	2	2	1	2	5	0	0	2	0	20	43	8
6 mos.	12	57	10	8	7	7	31	36	5	35	10	123	341	52
Sep-03	5	8	4	0	0	0	0	0	0	1	0	15	33	2
Oct-03	2	12	8	1	2	4	0	0	3	2	1	12	47	3
Nov-03	21	8	10	24	10	3	0	16	0	1	1	16	110	28
Dec-03	4	7	6	4	1	3	0	0	6	0	1	16	48	8
Jan-04	18	6	5	0	3	2	0	0	0	3	2	13	52	5
Feb-04	2	6	1	1	2	1	0	0	0	0	1	9	23	3
2nd 6	52	47	34	30	18	13	0	16	9	7	6	81	313	49
Mar-04	20	7	2	0	2	3	0	0	0	0	1	17	52	0
Apr-04	53	32	16	3	9	3	3	0	3	6	3	9	140	5
May-04	25	16	5	3	5	0	0	1	5	4	1	19	84	4
Jun-04	8	15	7	1	1	4	1	0	0	7	1	5	50	8
Jul-04	20	3	15	1	1	1	0	0	0	1	3	13	58	4
Aug-04	22	10	4	2	5	0	3	0	12	3	2	12	75	9
3rd 6	148	83	49	10	23	11	7	1	20	21	11	75	459	30
Sep-04	37	17	5	5	3	0	2	0	0	1	3	12	85	7
Oct-04	26	15	7	4	3	0	0	0	1	0	2	9	67	4
Nov-04	89	16	3	4	9	2	0	0	0	0	6	12	141	4
Dec-04	24	6	2	18	3	1	0	0	0	1	3	18	76	4

Jan-05	17	33	6	3	5	0	0	1	0	8	1	53	127	20
Feb-05	10	8	10	6	3	4	0	0	0	1	0	18	60	2
4th 6	203	95	33	40	26	7	2	1	1	11	15	122	556	41
Mar-05	11	13	1	3	1	0	0	0	0	3	1	6	39	4
Apr-05	17	14	4	7	0	2	0	0	0	1	1	6	52	0
May-05	27	15	7	4	6	2	0	0	0	3	5	19	88	8
Jun-05	40	17	5	2	0	2	0	0	0	1	2	14	83	5
Jul-05	9	25	5	2	1	1	0	0	0	4	1	10	58	4
Aug-05	33	12	18	5	2	1	0	0	0	0	4	10	85	0
5th 6	137	96	40	23	10	8	0	0	0	12	14	65	405	21
Sep-05	15	17	1	1	2	1	7	0	0	0	1	7	52	3
Oct-05	43	12	9	1	5	2	2	0	0	0	6	19	99	3
Nov-05	31	22	10	3	0	1	1	0	0	0	3	15	86	2
Dec-05	18	28	5	0	3	0	0	0	0	1	2	11	68	0
Month	Anbar	Bagdad	Salah ad din	Ninawa	Babil	Diyala	Basra	Dhi Qar	Najaf/Karbala	Other	Unknown	Non-Hostile	Total	Foreign
Jan-06	14	12	3	2	0	0	1	0	5	5	2	20	64	2
Feb-06	16	14	6	2	0	0	0	0	0	8	2	10	58	3
6th 6	137	105	34	9	10	4	11	0	5	14	16	82	427	13
Mar-06	15	5	3	1	0	0	1	0	0	0	2	6	33	2
Apr-06	29	21	6	2	4	0	1	4	0	1	2	12	82	6
May-06	19	20	1	2	10	0	9	0	0	3	3	12	79	10
Jun-06	29	12	4	3	4	1	0	0	0	5	0	5	63	2
Jul-06	20	9	2	2	1	1	1	1	0	3	1	5	46	3
Aug-06	32	16	7	1	1	0	1	0	0	0	2	7	67	1
7th 6	144	83	23	11	20	2	13	5	0	12	10	47	370	24
Sep-06	25	23	2	4	4	1	4	0	0	2	0	11	76	5
Oct-06	38	42	7	2	2	5	2	0	0	4	0	8	110	4
Nov-06	27	22	4	0	0	5	6	0	0	3	0	10	77	8
Dec-06	40	41	4	1	3	4	1	0	0	8	0	16	118	3
Jan-07	24	18	3	6	4	16	2	0	7	0	0	6	86	3

Feb-07	35	22	2	0	0	9	3	0	0	4	0	9	84	4
8th 6	189	168	22	13	13	40	18	0	7	21	0	60	551	27
Mar-07	14	34	11	0	0	11	2	0	0	0	0	10	82	1
Apr-07	19	47	3	0	6	15	8	0	0	9	0	10	117	13
May-07	14	57	6	1	18	22	3	0	0	2	0	8	131	5
Jun-07	4	57	6	2	3	9	6	0	3	9	0	9	108	7
Jul-07	13	40	4	1	2	4	7	0	1	1	1	14	88	9
Aug-07	8	32	3	4	0	7	5	0	0	1	0	28	88	4
9th 6	72	267	33	8	29	68	31	0	4	22	1	79	614	39
Sep-07	6	19	3	3	0	11	0	1	0	1	1	24	69	4
Oct-07	2	15	6	3	3	0	0	0	0	1	0	10	40	2
Nov-07	0	9	6	1	0	8	0	0	0	5	1	10	40	3
Dec-07	0	3	5	3	0	1	0	0	0	1	1	10	24	1
Month	Anbar	Bagdad	Salah ad din	Ninawa	Babil	Diyala	Basra	Dhi Qar	Najaf/Karbala	Other	Unknown	Non-Hostile	Total	Foreign
Jan-08	1	10	6	7	1	9	0	0	0	1	0	5	40	0
Feb-08													0	
10th 6	9	56	26	17	4	29	0	1	0	9	3	59	213	10
Total	1103	1057	304	169	160	189	113	60	51	164	86	793	4249	
									Total Hostile Casualties			3456		306

Table 5.2 shows non-hostile casualties by province. Each time a province's non-hostile losses exceeded the hostile losses for the month, the number appears in bold print. This table employs the same provinces as Table 5.1.

Table 5.2: Non-Hostile Casualties in Iraq by Province												
Month	Anbar	Baghdad	Salah-ad-din	Ninawa	Babil	Diyala	Basra	Dhi Qar	Najaf/Karbala	Other	Unknown	Total
Mar-03	0	0	0	0	0	0	0	0	0	8	2	10
Apr-03	0	5	1	0	0	0	1	1	6	9	4	27
May-03	1	0	4	3	6	2	2	0	0	11	4	33
Jun-03	2	2	1	0	0	0	0	0	2	3	2	12
Jul-03	0	6	2	0	2	1	1	1	1	3	4	21
Aug-03	2	5	2	3	0	1	0	0	0	3	4	20
6 months	5	18	10	6	8	4	4	2	9	37	20	123
Sep-03	0	1	4	2	1	0	1	0	0	4	2	15
Oct-03	2	5	1	0	0	1	0	0	0	1	2	12
Nov-03	1	5	1	2	1	0	1	0	0	3	2	16
Dec-03	1	7	4	1	0	0	0	0	1	2	0	16
Jan-04	1	2	0	6	0	0	2	0	0	2	0	13
Feb-04	3	1	1	2	0	0	1	0	0	1	0	9
2nd 6	8	21	11	13	2	1	5	0	1	13	6	81
Mar-04	2	3	4	1	0	1	0	0	0	4	2	17
Apr-04	1	4	1	1	1	0	0	0	0	1	0	9
May-04	5	2	3	1	0	4	0	0	2	1	1	19
Jun-04	2	2	0	0	0	0	1	0	0	0	0	5
Jul-04	4	1	1	2	2	0	1	1	0	1	0	13
Aug-04	7	1	2	0	0	0	0	0	1	1	0	12
3rd 6	21	13	11	5	3	5	2	1	3	8	3	75
Sep-04	5	1	1	0	1	1	0	0	0	3	0	12
Oct-04	1	3	0	0	1	1	1	0	0	1	1	9
Nov-04	5	3	0	0	0	1	0	0	0	2	1	12
Dec-04	5	4	0	2	0	0	1	1	3	2	0	18
Jan-05	34	4	0	4	0	6	1	0	0	4	0	53

Feb-05	2	3	8	0	3	1	0	0	0	1	0	18
4th 6	52	18	9	6	5	10	3	1	3	13	2	122
Mar-05	2	0	2	0	0	0	1	0	0	1	0	6
Apr-05	1	1	0	0	0	2	0	0	0	1	1	6
May-05	1	1	1	0	1	4	2	4	2	3	0	19
Jun-05	1	2	3	0	1	0	2	0	0	4	1	14
Jul-05	2	3	1	1	0	1	0	1	0	1	0	10
Aug-05	1	0	0	5	3	0	0	0	0	1	0	10
5th 6	8	7	7	6	5	7	5	5	2	11	2	65
Sep-05	4	1	0	0	0	0	0	0	0	2	0	7
Oct-05	1	6	3	2	0	0	2	0	0	4	1	19
Nov-05	2	3	0	2	0	1	0	2	0	4	1	15
Dec-05	1	2	3	0	1	0	0	3	0	0	1	11
Month	Anbar	Baghdad	Salah-ad-din	Ninawa	Babil	Diyala	Basra	Dhi Qar	Najaf/Karbala	Other	Unknown	Total
Jan-06	4	2	0	10	0	1	2	0	0	1	0	20
Feb-06	2	3	2	0	0	1	1	0	0	0	1	10
6th 6	14	17	8	14	1	3	5	5	0	11	4	82
Mar-06	2	2	0	0	0	0	0	0	0	2	0	6
Apr-06	9	1	0	2	0	0	0	0	0	0	0	12
May-06	7	2	1	2	0	0	0	0	0	0	0	12
Jun-06	2	2	0	0	0	0	1	0	0	0	0	5
Jul-06	1	3	0	0	0	0	1	0	0	0	0	5
Aug-06	4	0	1	0	0	0	0	0	0	1	1	7
7th 6	25	10	2	4	0	0	2	0	0	3	1	47
Sep-06	0	8	0	1	0	0	0	1	0	1	0	11
Oct-06	2	2	0	0	0	0	1	0	0	2	1	8
Nov-06	2	2	5	0	0	1	0	0	0	0	0	10
Dec-06	7	3	1	0	2	0	0	1	0	2	0	16
Jan-07	0	1	1	0	0	0	1	1	0	2	0	6
Feb-07	1	3	1	0	0	1	1	1	0	1	0	9

8th 6	12	19	8	1	2	2	3	4	0	8	1	60
Mar-07	2	3	1	0	0	1	0	0	0	2	1	10
Apr-07	3	4	0	0	0	2	0	0	0	1	0	10
May-07	1	2	1	0	0	0	1	0	0	2	1	8
Jun-07	0	2	2	1	0	0	1	1	0	1	1	9
Jul-07	4	5	0	2	0	0	1	1	0	1	0	14
Aug-07	5	6	2	0	0	0	0	0	0	14	1	28
9th 6	15	22	6	3	0	3	3	2	0	21	4	79
Sep-07	3	13	2	1	0	2	1	0	0	2	0	24
Oct-07	0	2	1	1	1	0	0	0	0	4	1	10
Nov-07	1	5	1	0	0	0	0	0	0	3	0	10
Dec-07	1	6	0	1	0	0	1	0	0	1	0	10
Month	Anbar	Baghdad	Salah-ad-din	Ninawa	Babil	Diyala	Basra	Dhi Qar	Najaf/Karbala	Other	Unknown	Total
Jan-08	1	2	0	0	0	0	0	0	0	2	0	5
Feb-08												0
10th 6	6	28	4	3	1	2	2	0	0	12	1	59
Total	166	173	76	61	27	37	34	20	18	137	44	793

Table 5.3 shows non-hostile casualties by the type of injury. Electrocutation and drowning caused a number of deaths early in the campaign, but declined considerably after 2004. In an increasing number of cases, the Department of Defense did not specify the mode of death in non-hostile cases.

Month	Vehicle	Aircraft	Weapons	Illness	Electrocut	Suicide	Drowning	Other	Unknown	Total	F Fire
Mar-03	4	0	2	2	0	0	0	2	0	10	9
Apr-03	8	6	11	0	1	0	0	0	1	27	6
May-03	13	7	8	3	0	0	2	0	0	33	0
Jun-03	4	0	3	2	0	0	1	0	2	12	0
Jul-03	7	0	6	4	0	2	0	0	2	21	0
Aug-03	3	0	3	11	0	0	2	1	0	20	0
6 mos	39	13	33	22	1	2	5	3	5	123	15
Sep-03	7	1	5	1	1	0	0	0	0	15	0
Oct-03	3	0	3	2	0	0	2	0	2	12	0
Nov-03	7	0	8	0	0	1	0	0	0	16	0
Dec-03	7	0	4	2	1	0	2	0	0	16	0
Jan-04	6	4	2	0	0	0	1	0	0	13	0
Feb-04	5	2	2	0	0	0	0	0	0	9	0
2nd 6	35	7	24	5	2	1	5	0	2	81	0
Mar-04	7	0	4	3	1	0	0	0	2	17	0
Apr-04	5	0	0	1	1	0	0	0	2	9	0
May-04	9	0	1	2	2	0	0	3	2	19	1
Jun-04	2	0	1	1	0	0	0	0	1	5	0
Jul-04	9	1	0	1	0	1	0	0	1	13	0
Aug-04	7	2	1		0	0	0	0	2	12	0
3rd 6	39	3	7	8	4	1	0	3	10	75	1
Sep-04	8	0	0	1	0	0	0	0	3	12	0
Oct-04	4	2	1	1	0	0	0	0	1	9	0
Nov-04	9	0	1	1	0	0	0	0	1	12	0
Dec-04	9	5	3	0	0	0	0	0	1	18	0

Jan-05	9	33	1	2	1	0	0	0	7	53	0
Feb-05	13	0	1	1	0	0	0	1	2	18	0
4th 6	52	40	7	6	1	0	0	1	15	122	0
Mar-05	3	0	1	0	0	1	0	0	1	6	2
Apr-05	1	0	1	3	0	0	0	1	0	6	0
May-05	6	10	0	1	0	0	0	0	2	19	0
Jun-05	7	0	1	0	0	0	0	3	3	14	0
Jul-05	6	0	1	0	0	0	0	0	3	10	0
Aug-05	4	0	1	0	0	0	3	0	2	10	0
5th 6	27	10	5	4	0	1	3	4	11	65	2
Sep-05	4	0	1	0	0	0	1	0	1	7	0
Oct-05	7	0	3	1	0	1	2	0	5	19	0
Nov-05	9	0	1	3	0	0	0	1	1	15	1
Dec-05	3	2	2	2	0	0	0	1	1	11	0
Month	Vehicle	Aircraft	Weapons	Illness	Electrocute	Suicide	Drowning	Other	Unknown	Total	F Fire
Jan-06	8	9	1	1	0	0	0	0	1	20	0
Feb-06	4	0	2	0	0	0	0	1	3	10	0
6th 6	35	11	10	7	0	1	3	3	12	82	1
Mar-06	1	1	1	1	0	1	0	0	1	6	0
Apr-06	9	0	1	1	0	0	0	0	1	12	0
May-06	4	2	0	0	0	0	0	0	6	12	0
Jun-06	1	0	0	0	0	0	0	0	4	5	0
Jul-06	0	0	2	0	0	0	0	0	3	5	0
Aug-06	2	2	0	1	0	0	0	0	2	7	0
7th 6	17	5	4	3	0	1	0	0	17	47	0
Sep-06	4	0	0	0	0	0	0	1	6	11	0
Oct-06	4	0	1	1	0	0	0	0	2	8	0
Nov-06	0	3	0	0	0	0	0	0	7	10	0
Dec-06	4	5	0	2	0	0	0	0	5	16	0
Jan-07	3	0	0	0	0	0	0	1	2	6	0

Feb-07	3	0	0	1	0	0	0	3	2	9	2
8th 6	18	8	1	4	0	0	0	5	24	60	2
Mar-07	1	0	0	2	0	0	0	1	6	10	0
Apr-07	3	2	0	0	0	1	0	3	1	10	0
May-07	2	0	1	1	0	0	0	0	4	8	0
Jun-07	1	1	1	1	0	0	0	2	3	9	0
Jul-07	3	1	0	1	0	1	1	0	7	14	0
Aug-07	1	19	0	1	0	0	0	0	7	28	0
9th 6	11	23	2	6	0	2	1	6	28	79	0
Sep-07	10	0	0	1	0	1		5	7	24	0
Oct-07	3	0	0	1	0	0	0	2	4	10	0
Nov-07	3	2	1	1	0	0	0	1	2	10	0
Dec-07	2	0	0	1	0	0	0	2	5	10	0
Month	Vehicle	Aircraft	Weapons	Illness	Electrocut	Suicide	Drowning	Other	Unknown	Total	F Fire
Jan-08	1	0	0	0	0	0	1	1	2	5	0
Feb-08										0	
10th 6	19	2	1	4	0	1	1	11	20	59	0
Total	292	122	94	69	8	10	18	36	144	793	21

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APPENDIX I
MAPS OF THE KOREAN WAR



Map 1: The NKPA advance, June 1950.



Map 2: UN advance, Oct-Nov 1950.



Map 3: Chinese advance Nov. 1950-Mar. 1951

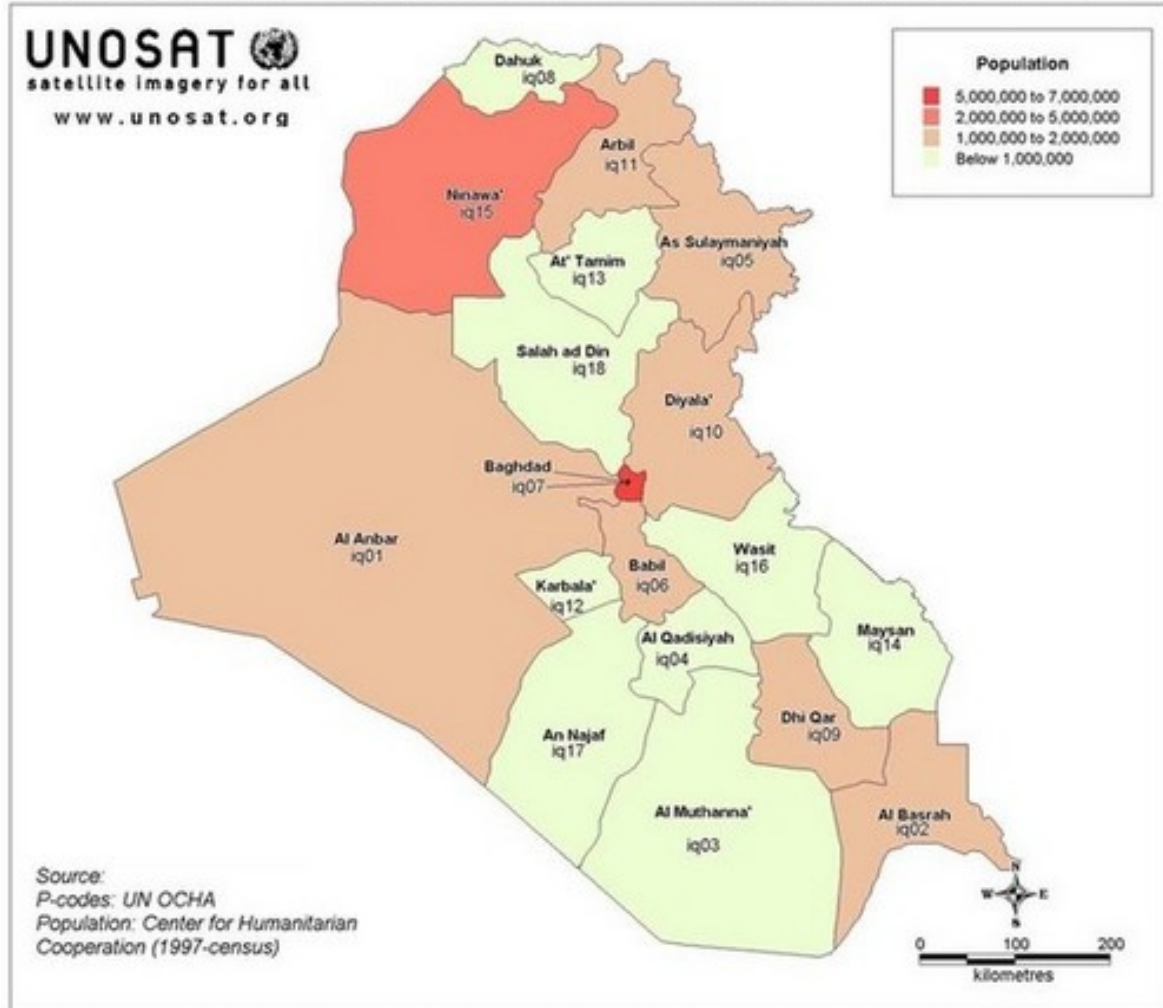


Map 4: Stalemate Apr. 1951-Jul. 1953

Source: Public Broadcasting System, "The Korean War." *The American Experience*.
www.pbs.org/wgbh/amex/macarthur/maps/koreaintro.html

APPENDIX II
MAP OF IRAQ

IRAQ - GOVERNORATES WITH RELATED PLACE-CODE (IQ = IRAQ) AND POPULATION



Map 5: Iraq divided by province and color coded by population density

Source: UN Operational Satellite Applications Program, "Governorates with Related Place Code and Population," <http://unosat.web.cern.ch/unosat/>: Internet, accessed 5 May 2008.