Civilian Death and Injury in Iraq, 2003-2011

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"I would say 30,000, more or less, have died as a result of the initial incursion and the ongoing violence against Iraqis." George W. Bush, December 2005

In March 2003 the U.S. and others in its coalition invaded Iraq. We know the number of U.S. soldiers killed in the war in Iraq. We know their names and how they died. The number of Iraqi civilians killed due to the Iraq war, however has been hotly debated. The Iraq war was undertaken to end the (illusory) threat of weapons of mass destruction possibly under construction in Iraq and to install a democracy. Because the legitimacy of the cause of the Iraq war was controversial from the outset, the human costs of the war have been under intense scrutiny.

I estimate that at least 126,000 Iraqi civilians have died as a direct consequence of the war's violence. This is an extremely conservative estimate based on what has been documented by public sources. To understand the complete toll of the Iraq War, to this estimate of civilian killed from 2003, one must add the estimate approximately 10,000 Iraqi military killed at the outset of the war, the approximately 19,000 insurgents killed from June 2003-September 2007, the more than 10,100 Iraqi military and police killed since June 2003 and the nearly 6,300 U.S. and allied soldiers and U.S. contractors killed in the war. Total direct violent deaths are thus 171,000: about 165,000 Iraqis and 6,300 US and allied soldiers and contractors.

Many thousands more Iraqis have been wounded by bombs, bullets, and the fire that is often triggered by bombing. Some additional number of people have also died due to the war's effect on Iraqi infrastructure and economy, in particular on the systems that provide health care and clean drinking water. The figures for the number of Iraqi civilians killed have been clouded

1 I thank Catherine Lutz and Michael Spagat for comments on an earlier draft.
3 See Appendix A for very short discussion of the different figures given for violent and excess death due to war in Iraq.
4 See Catherine Lutz reports for costofwar.org for a discussion.
somewhat by arguments about methods for counting the dead. Although the intricacies of the
different methods and their assumptions are fascinating, to focus on the arguments about how to
record the dead and wounded is to sometimes to obscure the toll of the war.

**Why have we argued so much and so long about the human toll in Iraq?**

The first reason that the numbers killed in Iraq have been so contested is politics. The
United States was at great pains to underscore its commitment to avoid harming civilians in Iraq
during the invasion in 2003 and the subsequent occupation. Before the invasion, the Pentagon
invited reporters to hear how civilian casualties would be minimized in the air war.⁵ Chairman of
the Joint Chiefs of Staff Richard Myers told reporters that in U.S. "targeting, we'll go to
extraordinary lengths to protect non-combatants and civilians and ... and facilities that should
not be struck. And we always do that."⁶ The use of precision weapons was emphasized, and
when civilians were killed, the U.S. military spokespersons tended to emphasize the great care
that had been taken to minimize effects on civilians. When violence grew in 2006, the United
States emphasized that it was reducing civilian casualties by changing rules of engagement.

The U.S. military apparently did not make a systematic account of Iraqi casualties in the
early weeks of the war, nor did it make public many estimates or detailed accounts of civilian
death unless in response to an undeniable tragedy such as the U.S. bombing of Iraqi markets early
in the war. Iraq's Ministry of Health's statistics department was ordered to stop counting the
civilian dead in late 2003, by some reports at the insistence of the Coalition Provisional
Authority. Reporting has been intermittent since that time.⁷ The U.S. Department of Defense
(DOD) has begun to make more of its data public over the years, but the releases are periodic and
do not include all the years of the war.⁸

Some years into the Iraq war, the RAND Corporation was asked by the U.S. DOD to
assess the questions and controversies related to counting casualties. Rand produced a report in

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⁶ Matt Lauer and Katie Couric, "General Richard Myers, chairman, Joint Chiefs of Staff, discusses preparing for a possible war with Iraq," Today Show, NBC-TV, 27 February 2003, 7:00 a.m.
2008 that it called simply, *An Argument for Documenting Casualties*. In that report, the authors, Katherine Hall and Dale Stahl, note that it was not clear that "anyone in the U.S. military or Coalition is systematically collecting and analyzing" data on Iraqi civilian fatalities. Hall and Stahl observed that, "Had there been a more robust effort to collect accurate information on Iraqi civilians, military strategists and political leaders might have acted more determinedly to secure the civilian population prior to the carnage of 2006."

The second reason for the contentious debate about the death and injury toll in Iraq is that the way one counts the dead, tallies public records, or estimates the human toll can produce what appear to be, and sometimes are, dramatically different figures. As this paper suggests, however, the ostensible differences often appear larger than they are because those who have been observing and measuring death and injury in Iraq have been counting different, though sometimes overlapping, events. The different methods, and *some* of the disagreements advocates of different approaches have with each other, are briefly discussed in Appendix A. The literature on counting casualties in Iraq is quite voluminous however, and I have not chosen to rehearse all the issues here.

**Trends in Direct War Related Civilian Death**

In Iraq there have been four main causes of civilian death due to the war: death due to injuries directly caused by combat; lawlessness, namely targeted killings, executions, or military atrocity; indirect death due to increased vulnerability; and an unknown number possibly killed due to the long term environmental effects of the war. I do not attempt to estimate the latter two categories.

We know the most about the combat related deaths. These were caused when the invasion occurred as bombs targeted the soldiers and military equipment of the Iraqi military and civilians were directly harmed. Civilians were also killed in crossfire incidents. During the

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10 The military was collecting some data at the time, but it may not have been made available to Hall and Stahl.
occupation that followed the invasion, as resistance to the occupation rose, civilians died when insurgents used suicide bombs, improvised explosive devices, or when Coalition forces used aircraft, tanks, or other weapons to kill actual and suspected insurgents, but killed civilians.

Most violent Iraqi deaths during the war may, however, have occurred as a result of the lawlessness that was endemic from 2003 to 2008 in Iraq. Armed violence, including executions, during and after major combat ends is not uncommon: it occurs in many wars. In Iraq, while the insurgency and counterinsurgency fighting, and sectarian violence were most intense, many individuals were killed, the majority in the first six years of the, so-far, eight year war. The pattern of the killing has evolved over the course of the war.

The following figure (figure 1) uses data from an analysis of the Iraq Body Count records of violent deaths in Iraq for the first year of the war. During the first year, Coalition force accounted for about 52 percent of recorded violent deaths. Most of the coalition caused deaths were due to air attack. Unknown perpetrators accounted for 41 percent of recorded violent deaths, while anti-coalition forces accounted for about 4 percent of recorded deaths.

**Figure 1. Reported Perpetrators of Civilian Deaths by Armed Violence in Iraq from 20 March 2003-19 March 2004.**

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In the first five years of war in Iraq, more than 92,000 people were killed by armed violence. The pattern of deaths caused by different parties to the war evolved so that by the end of the first five years of fighting in March 2008, unknown perpetrators had caused the most (74 percent) of all violent deaths recorded by Iraq Body Count. About 12 percent of all violent civilian death could be attributed solely to U.S. coalition forces. Anti-coalition forces accounted for almost 11 percent of all violent civilian death. Figure 2 shows the recorded civilian death by perpetrator for the first five years of the more than eight year war in Iraq.

Figure 2. Reported Perpetrators of Civilian Deaths by Armed Violence in Iraq from 20 March 2003-19 March 2008.  

Source: based on Hicks, et al., "Violent Deaths of Iraqi Civilians."
Primarily Iraqi Police and Iraqi Military Forces

Unknown perpetrators executed their victims or tortured them and then executed them. These deaths are an indicator of the lawlessness and the ethnic violence that broke out in Iraq following the invasion as revenge killings, and clashes between Sunni, Shia and Kurdish groups escalated. Iraqi soldiers and American soldiers killed some number as well. Throughout the first five years of the war, when Coalition forces only could be identified as the perpetrator of violence coalition airpower was the cause of death in 60 percent of the cases. When Anti-coalition forces killed civilians it was primarily by suicide bombs, vehicle bombs, and roadside bombs. Unknown perpetrators killed the majority of their victims by execution and small arms fire.¹⁵

How many civilians have died so far due to war related armed violence from 2003 to 2011? Figure 3 presents two of the most widely used figures for Iraq's war dead, "Iraq Body Count" (IBC) and the Brooking Institution's "Iraq Index". IBC records deaths by scanning more than 200 separate press and media outlets. The reports are crosschecked with official information

¹⁵ Hicks, et al., "Violent Deaths of Iraqi Civilians."
from non-governmental organizations, hospitals, morgues, and other official sources. Brookings uses IBC data as a starting point for 2003 to 2005 and then increased those counts by a rate of 1.75 to reflect the fact that "estimates for civilian casualties from the Iraqi Ministry of the Interior were 75 percent higher than those of our Iraq Body Count-based estimate over the aggregate May 2004-December 2005 period."\(^\text{16}\) In May 2010, Brookings began using Iraqi government figures.\(^\text{17}\) I discuss some of the many issues involved in recording and estimating deaths in Iraq in Appendix B. In addition, Iraqi police and military forces have been killed by insurgents and in friendly fire incidents since the end of the war. Icasualty reports 9,820 such security deaths from 2003 to 2010.\(^\text{18}\)

\(^{16}\) Michael E. O'Hanlon and Ian Livingston, "Iraq Index: Tracking Variables of Reconstruction and Security in Post-Saddam Iraq," Brookings, 29 May 2011, p. 32.

\(^{17}\) O'Hanlon and Livingston, "Iraq Index," 29 May 2011, p. 3.

Figure 3. Brookings and IBC Figures for Iraqi Civilians Killed 2003 - May 2011

** Iraq Body Count, through 24 May 2011. Note that IBC includes 5 deaths from January - February 2003; IBC also notes that a full analysis of the WikiLeaks War Logs may add 15,000 deaths.

The Brookings total for the war is over 114,800; IBC has a range, with the high total being more than 111,800. The IBC acknowledges that they anticipate that a full analysis of the WikiLeaks War Logs may add 15,000 deaths. On this basis, I suggest that there have been at least 126,000 violent direct deaths in Iraq since the March 2003 invasion.

Wounding

By one estimate, perhaps about as many who have been killed by war have been wounded in various ways. The U.S. National Counterterrorism Center, which focuses only on "terrorist" events counted about 110,000 wounded Iraqis from 2004 through 2010. The international military coalition and Iraqi security forces are also responsible for wounding some

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Iraqis. The Iraq Body Count data set does include wounds caused by all parties, but only tallies incidents where there is at least one civilian death; incidents where are only injuries but no deaths are not recorded. According to a 2010 report by Handicap International, 13,000 cluster munitions, containing 1.8 to 2 million submunitions were used by the United States and Britain in 2003 in the first weeks of combat and Iraq remains one of the most heavily contaminated countries in the world.\(^{22}\) Further, landmines and other unexploded ordnance remain from Iraq's previous wars — with Iran from 1980 to 1988, and with the U.S.

The legacy of unexploded ordnance, and other violent events is evident in the number of amputees in Iraq. The International Committee for the Red Cross supports 13 centers in Iraq that provided prostheses, orthoses and rehabilitation in Iraq. The ICRC supported centers provided more than 300 prostheses for survivors of mines to Iraqis in 2009. The ICRC noted that, "The series of conflicts that took place in Iraq and the on-going turmoil there, together with the still weak public health-care system, resulted in an ever growing number of disabled people. Unfortunately there was still no way to pinpoint that number with certainty." But the ICRC noted that the need for orthotic support devices and prostheses would grow, even assuming no more wounded. "The WHO's estimate that 0.5% of the total population was in need of physical rehabilitation would put the figure at 156,000; since all of them would need a new orthopaedic device every three years on average, which would mean an average production of over 52,000, (still about three times the number of orthopaedic appliances delivered in 2009)."\(^{23}\)

Although the Iraqi health care system had been harmed by more than a decade of economic sanctions, it was further harmed by a decade of war. There were 34,000 physicians in Iraq in 2003 before the war; some 20,000 fled after the invasion. While some have returned, in 2008, there were about 16,000 physicians to care for about 30 million people.\(^{24}\)

It is difficult to assess the psychological effects of the war on Iraq's children. Many Iraqi children and adults suffered post-traumatic stress symptoms after the 1991 Gulf War.\(^{25}\)

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\(^{24}\) Brookings, "Iraq Index," 29 May 2011, p. 29.

affects the economy, crime, and other stressors so that it is not simply the exposure to violent trauma that could contribute to psychological distress. A clinic for children with PTSD opened in Iraq in 2008. Dr. Haider Maliki, of the Central Pediatric Teaching Hospital in Baghdad estimated in 2010 that "28% of Iraqi children suffer some degree of PTSD, and their numbers are steadily rising." If Dr. Maliki's assessment is correct, it is likely that more than 3 million Iraqi children suffer PTSD.

**Indirect Death**

Although Iraq's population has been estimated at 31 million people, there has been no census in Iraq since the war began. Life expectancy in Iraq at birth in 1989 was 64 years old and infant mortality rates were estimated at 48 per 1000 live births in 1985. Iraq had a better public health and hospital infrastructure, and a better baseline of public health than Afghanistan. But the lack of comprehensive surveys inhibits drawing firm conclusions about the effects of war on the overall health of Iraqi civilians. We can say, however, that Iraqi health has suffered during the war. Many of the millions of Iraqis who were pushed out of their homes by violence have not been able to return and more than half of Iraq's internally displaced population faces food insecurity. Acute malnutrition among children in Iraq doubled in the months after the U.S. invasion and remains a serious problem. In 2006 more about 1 in 4 children under five was classified as "stunted" by the World Health Organization.

A household cluster sampling interviews conducted in January 2002 and September 2004, in what has become known as the first *Lancet* study, found that informants reported higher rates of infant mortality than before the invasion. But further, while U.S. researchers have recently focused on the health effects of toxic substances in the dust stirred up by the travel of

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28 World Bank Data set.
heavy military vehicles for U.S. soldiers, Iraq's civilians breathe the same air as U.S. soldiers. U.S. soldiers are suffering higher rates of pulmonary and cardiovascular disease which may be linked to the dust. Finally, as noted below in the discussion of Fallujah, there is some evidence that toxic exposures during the 2004 siege, has led to increased cancer and other disease.

Media and Humanitarian Worker Deaths

Humanitarian aid workers and the media are neutral non-combatants. Yet they have sometimes been targeted for intimidation, kidnapping and murder. Some have been killed in crossfire, or by US forces that mistake them for combatants. Perhaps the most dramatic loss of life was the killing of 22 United Nations staff in Baghdad in August 2003; another 100 staff were injured in the same attack. The UN estimated that more than 94 relief workers had been killed in Iraq between 2003 and 2007 and 248 were injured.33

According to the Committee to Protect Journalists, 226 journalists and other media workers have been killed in Iraq since the March 2003 invasion. Of those, 53 were killed in crossfire, 93 were murdered and three were killed while on dangerous assignments.34

When Soldiers "Snap"

Much of the sustained press attention to civilian death at the hands of US forces in Iraq has focused on deliberate killing — cases where US soldiers and marines "snap," clearly violating the laws of armed combat and their rules of engagement. In these cases, US military personnel kill civilians, or they may rape, kidnap or torture them. They go berserk or in some instances, they have made plans to kill non-combatants. Intentionally killing non-combatants is considered an atrocity for which actors are morally responsible and legally culpable. These are war crimes.

Perhaps the most famous incident of deliberate atrocity by U.S. forces since 2001 occurred in Haditha, Iraq. In the early morning of 19 November 2005 a twenty year old Marine, Lance Corporal T.J. Miguel Terrazas, was killed by a roadside bomb. In retaliation, over the course of about four hours, a group of US Marines killed 24 unarmed Iraqi civilians in Haditha.

including children aged 14, 10, 5, 4, 3 and 1 over the course of about four hours as members of a
teenage man unit, the 1st Squad of Marine Company K, Third Battalion Marines, attacked people
in three houses and a taxi carrying four college students. Two Marine commanders were
relieved of duty July 2006 for negligence in investigating the Haditha incident. In December 2006
four marines were charged with "unpremeditated murder" and four officers were charged with
failing to fully investigate and accurately report the incident. Staff Sergeant Frank Wuterich
killed five men who had surrendered and then led an assault on several houses where more died.

One participant, Sergeant Sanick Dela Cruz said, "I know it was a bad thing what I've done, but I
done it because I was angry TJ was dead." Of the eight Marines charged for various offenses
related to the killings, most charges, including those of unpremeditated murder, were dropped for
all but one Marine, Frank Wuterich.

When they come to light, these acts, and others like them, are condemned and US
political and military leaders argue that incidents of deliberate killing are both "abhorrent" and
aberrant. These cases are said to be exceptional. The rule, we are told, is that most U.S. forces
behave within the law and with honor. Asked for comment about a case against U.S. personnel
alleged to have committed murder and rape in Mahmudiya, Iraq in 2006, White House
spokeswoman, Dana Perino, said, "The president has full confidence in the military to investigate
alleged crimes and to punish anyone convicted of abhorrent behavior that dishonors the proud
traditions of our military. He will not comment on ongoing investigations so as not to prejudice
the outcome; however, he believes that 99.9 percent of our men and women in uniform are
performing their jobs honorably and skillfully and they deserve our full appreciation and
gratitude." At a briefing in Baghdad, Brigadier General Donald Campbell made a similar
argument. "While the bulk of our forces, 99.9 percent, serve with honor, there are a small number

36 Eric Schmidt and David S. Cloud, "General Faults Marine Response to Iraq Killings: Calls Officers
37 Quoted in Mark Oliver and Agencies, "Haditha Marine Watched Superior Kill Surrendering Civilians,"
38 Other incidents in Iraq and Afghanistan are documented in a press release by the US Army Criminal
Investigation Command, "Army Criminal Investigators Outline 27 Confirmed or Suspected Detainee
of individuals who sometimes choose the wrong path. While we understand the stresses and pressures inherent in combat operations, we cannot and will not accept behavior that is legally, morally, or ethically questionable.  

One Case: Fallujah, Iraq 2004

The enemy has a face. It is Satan's. He is in Fallujah, and we are going to destroy him.  

Fallujah, Iraq, a city of approximately 300,000 people before the March 2003 U.S. invasion of Iraq, was easily occupied in April 2003 by the United States military. On 28 April 2003, just a few days before President Bush's "Mission Accomplished" speech, about 200 protesters gathered at a school in Fallujah, demanding that that the school, occupied by U.S. forces, be reopened. Rocks were thrown by the Iraqi protesters, who were shouting at the soldiers to leave. The U.S. soldiers, who said that they saw AK-47 weapons and that they were shot at by protestors, opened fire on the protestors, killing 17 civilians and wounding 74. An investigation by Human Rights Watch found "no compelling evidence" that the school building had been fired upon by protestors, although there were signs of rock throwing. A protest of U.S. actions two days later resulted in three more killings of civilians by the U.S. military, who again said they were under attack.  

Over the next several months, resistance to U.S. occupation increased in Fallujah and more broadly in the area known as the Sunni Triangle. General James Mattis, commander of the Marines in Fallujah ordered that the U.S. forces gain control through determined infantry pressure on the insurgents. Mattis said, he was "determined to demonstrate respect to the Iraqi people." He said "keep your soldiers, sailors and Marines focused on the mission and resistant to

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adversarial relationships with the Iraqi people . . . we obey the Geneva Convention even while the enemy does not. We will destroy the enemy without losing our humanity."\textsuperscript{43}

On 31 March 2004, four private military contractors, working for Blackwater USA, driving through the city were killed by gunmen. A crowd gathered, gasoline was poured into one of the vehicles, and it was set ablaze. The charred and dismembered remains of two of the men were then hung over a bridge. Photographs of the dead contractor's mutilation and their remains on the bridge were broadcast worldwide, and led to outrage in the United States. U.S. Ambassador to Iraq, Paul Bremmer said, the "events are a dramatic example of the ongoing struggle between human dignity and barbarism." U.S. Secretary of Defense Donald Rumsfeld is reported to have said, "we have got to pound these guys." Brigadier General Mark Kimmet, said: "We will hunt down the criminals. We will kill them or we will capture them . . . and we will pacify Fallujah."\textsuperscript{44}

President Bush ordered an assault on Fallujah, despite the fact that the Marine Commander of the area, Major General Mattis was not in favor of the attack. Mattis cautioned that the Marines were preparing a different strategy in Fallujah to deal with the insurgency, focused less on breaking down doors and more on building trust.\textsuperscript{45} On 5 April, Operation Vigilant Resolve, meant to pacify Fallujah in a few days, began with a Marine assault. During a briefing by the U.S. commander in Iraq, General Sanchez, Bush told Sanchez to "Kick ass!" in Fallujah. "If somebody tries to stop the march of democracy, we will seek them out and kill them! We must be tougher than hell! . . . Our will is being tested, but we are resolute. . . . Stay strong! Stay the course! Kill them! Be confident! Prevail! We are going to wipe them out! We are not blinking!"\textsuperscript{46}

The battle turned into a bloody stalemate and a public relations fiasco for the American forces. After the bombing of a mosque and other incidents that were politically sensitive, the offensive was halted and control of the city was given to Iraqi forces on 28 April on the understanding that insurgents would be kept out of the city. But insurgents remained and a decision was made to attack again.

\textsuperscript{43} Mattis quoted Camp, \textit{Operation Phantom Fury}, p. 50.
\textsuperscript{44} Quoted in Camp, \textit{Operation Phantom Fury}, p. 7.
\textsuperscript{45} Camp, \textit{Operation Phantom Fury}, pp. 33-38; 58.
\textsuperscript{46} Quoted in Camp, \textit{Operation Phantom Fury}, p. 73.
Public pressure, specifically concern for civilian casualties, had caused the Americans to withdraw in April. U.S. commanders felt they had lost the information operations (media public relations) war to critical coverage by Arab television and other news media. Or as Lt. General Conway said, "Al Jazeera kicked our butts." But there were not only Arab language news reports of civilian casualties. An Iraqi doctor, Dr. Abdul Jabbar working in Fallujah Hospital told a reporter in May that he could not keep track of how many wounded people he treated. "Many people were injured and killed by cluster bombs. Of course they used cluster bombs. We heard them as well as treated people who had been hit by them!" The doctor estimated that at least 700 people died. USA Today estimated that the death toll of Iraqis for operations in April was around 600, although the number of civilians killed within that total was unclear.

But the U.S. halt to operations was temporary. In May 2004 military operations — air, artillery, and special forces — began to "shape" the environment and to prepare the news media for a renewed assault. According to Major Sean Tracy the idea for the slower operations was to avoid "watching this on TV and you see all these bombs dropping, and somebody's going to throw up their hands and say, 'Hey, isn't this enough?' . . . . Reporters and the world would become accustomed to artillery and air attack." Although the "shaping" of the battlefield began in the summer months, the official order to attack came in September 2004.

Operations included US Army and Marines, as well as British and Iraqi forces. The Marines planned to assault the city along three entry points and then go from building to building to kill insurgents. Pilots of marine aircraft used maps and scale models to memorize their plans of attack. An area of the desert was used to practice the procedures that would be used in the assault. Marine Colonel Earl Wederbrook said, "Fallujah was mapped out to the foot. Every visible enemy roadblock, stronghold, suspected weapon cache, safe house, rat hole or storage bunker was located, identified and labeled. Pilots spent untold hours studying the maps." Wederbrook said, "Nearly every building was identified with a name or a number." Wederbrook also said: "The

rules of engagement were very explicit . . . do not drop unless you are absolutely sure of your target. And then only use munitions that would minimize collateral damage." Certain buildings were labeled as off limits and "pilots memorized the collateral damage estimates and danger close distances of all their available ordnance."\textsuperscript{50}

The 1st Marine Division's official rules of engagement for Operation Phantom Fury, to control Fallujah were that "no forces are declared hostile. However, individuals within the Fallujah AO who are carrying arms openly are demonstrating hostile act/intent unless there is evidence to the contrary; pose an imminent threat to Coalition Forces, and may be attacked subject to the following restrictions." The ROE then specify that marines should "minimize collateral damage to innocent persons and property." Marines should "not target or strike any of the following except in self-defense to protect yourself, your unit, friendly forces and designated persons or property under your control."

1. Non-combatant civilians
2. Hospitals, mosques, churches, shrines, schools, museums and other historical and cultural sites
3. Civilian populated areas or buildings unless the enemy is using them for military purposes . . . \textsuperscript{51}

Although the numbers were unclear, it was estimated at the outset of the operation that there were about 1,000 "hard core" insurgents and two thousand "part-timers" in Fallujah.\textsuperscript{52} In the days prior to the assault, the city was surrounded by US and other coalition forces and residents were told by the Marines to leave through checkpoints, or if they remained, to stay inside their homes. At these checkpoints males between the ages 15 and 45 were turned back in to the city or detained. The United Nations coordinated Emergency Working Group estimated on 11 November that approximately 200,000 people left Fallujah and were dispersed throughout Iraq while approximately 50,000 civilians remained in the city.\textsuperscript{53}

\textsuperscript{50} Quoted in Camp, \textit{Operation Phantom Fury}, p. 136.
\textsuperscript{51} Quoted in Camp, \textit{Operation Phantom Fury}, p. 150.
\textsuperscript{53} Emergency Working Group — Fallujah Crisis, (EWG) "Update Note" 11 November 2004, p. 1. [www.uniraq.org/documents/Falluja%20Bulletin%2011%20November.pdf](www.uniraq.org/documents/Falluja%20Bulletin%2011%20November.pdf) "The Emergency Working Group (EWG) comprises humanitarian organizations UN; NGO; Red Cross/Crescent Organizations (RCO) and relevant IIG Ministries. The most recent meeting was an IIG emergency coordination meeting on Falluja, hosted by the Ministry of Displacement and Migration (MoDM) on 9 November. This meeting, which took place in Baghdad, was linked by teleconference to the EWG in Amman and UNAMI Baghdad." p. 1.
United Nations Secretary General Kofi Annan wrote President Bush and Prime Minister Blair on 31 October to express his concerns about the potential negative political effects of the impending operation. Annan favored a diplomatic solution to the crisis. Further, he said, "I wish to express to you my particular concern about the safety and protection of civilians. Fighting is likely to take place mostly in densely populated urban areas, with an obvious risk of civilian casualties." Although Secretary of State Colin Powell called Annan, the concerns about civilian casualties were generally either ignored or dismissed by officials in the U.S., U.K. and in Iraq.

The second assault by U.S. and Iraqi forces on Fallujah, *Operation Phantom Fury*, officially began on 7 November 2004. The assumption was that anyone who remained in the city was an insurgent. The initial breach of the city through three corridors occurred at night; the Marines preferred to fight in the dark because of the advantage their night vision goggle gave them to direct their fire. In their first operation, Marines secured Fallujah General Hospital by force and one of the two remaining health clinics was also destroyed that night. The UN Emergency Working Group stated on 11 November, "It is reported that the water and electricity systems in Falluja have been cut off by the IIG/MNF-I. This action directly affects civilians (approximately 50,000 people inside Falluja) for whom water is a basic need and a fundamental human right." The press and humanitarian organizations were denied access to Fallujah, the entry of medical supplies and food were severely restricted, and electricity and water were cut by Multinational Forces. Only ambulances operated by Multinational Forces Iraq were allowed passage in and out of Fallujah. Over the next few days, those residents of Fallujah who had been displaced by the operation began to face food, water and medical shortages in the places where they took shelter. On 19 December, the Emergency Working Group noted that "monitors report there is sporadic access to the various IDP [internally displaced persons] locations due to military activities/checkpoints and insecurity; whereas Falluja itself remains strictly inaccessible due to

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the ongoing conflict. IOM monitors report that clinics at the IDP areas are experiencing shortages of some drugs and that many IDPs have not received their food rations . . .

The fighting in Fallujah was intense both day and night, moving house to house over the course of four weeks, though sporadic fighting continued for several more weeks after the city was opened for the return of its residents on 23 December. As Bing West observed, "With scant civilians in the city, the usual tactic was to throw grenades over the courtyard wall, blow the lock on the metal gate, rush a four-man fire team into the courtyard, and shout and bang on the windows of the house to draw fire. . . . If nothing happened, then the most risky step followed: smashing through the doors and searching room by room down narrow, gloomy corridors." The process was quick. If the Marines received fire "the line held up while tanks moved forward, sending shell after shell into the house." The Marines used air strikes from helicopters and drone aircraft, cannon from M1 Abrams tanks, and bulldozers. The US also used M825 "felt wedge" 155 mm shells, which burn white phosphorus for up to 15 minutes for illumination, to mark an area for a strike, or to provide cover.

Colonel Michael Shupp thought the Rules of Engagement for Fallujah were too restrictive: "We had very, very rigid ROEs, almost to the point of being too demanding on engaging." Major General Richard Natonski, who commanded the operation in Fallujah, said, "there were many times that my regiments had targets they wanted to engage, but because of the rules of engagement and the amount of collateral damage, we were precluded from hitting certain sites in the city." Natonski said:

We tried to use a progression of force in our operations. If there was a rifleman in a building we would use small arms. If there was more than one person and they were firing RPGs then maybe we'd shoot a Hellfire into the building. As the battle progressed, because of the intensity of the resistance and if we knew there were insurgents in buildings, in some cases we'd drop the structure before we'd risk soldiers' or Marines' lives by sending them into the buildings. We used everything from tanks at close range to D9 armored bulldozers to 500-pound joint direct attack munitions (JDAMs). But we'd try to isolate that one specific building rather than damaging the entire neighborhood. It is important to safeguard the Marines, soldiers and civilians in the city; you can always rebuild a house, you can't rebuild a life.

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58 West, No True Glory, p. 270.
59 West, No True Glory, p. 274.
60 Camp, Operation Phantom Fury, p. 211.
61 Quoted in Camp, Operation Phantom Fury, p. 149.
62 Quoted in Camp, Operation Phantom Fury, p. 152.
63 Quoted in Camp, Operation Phantom Fury, p. 152.
Marine Corporal Michael Leduc described his briefing on the rules of engagement for Fallujah in 2004 as including the assumption that everyone in the city was hostile.

The battalion JAG officer wrapped up by sort of going, "Okay, Marines, you see an individual with a weapon, what do you do?"
We mutter in silence for a minute, waiting for somebody else to answer, and one guy said, "Shoot him."
"No. Shooting at a target, putting rounds down range and suppressing a target, is one thing. Sighting and killing a target is another. So again, you see an individual with a weapon, what do you do?"
"Kill him."
"You see an individual with a pair of binoculars, what do you do?"
"Kill him."
"You see an individual with a cell phone out, what do you do?"
"Kill him."
"You see an individual, who although may not be actually carrying anything or displaying any specific hostile action or intent running from, say, one building to another, running across the street or even running away from you, assume that he is maneuvering against you and kill him. You see an individual with a white flag and he does anything but approach you slowly and obey commands, assume it's a trick and kill him." 64

A Lebanese Broadcasting Corporation journalist, Burhan Fasa’a who entered Fallujah during the siege reported that he personally witnessed many civilians killed and injured. Interviewed by the independent journalist Dahr Jamail in December 2004, Burhan Fasa’a said that, "The dead were buried in gardens because people couldn’t leave their homes. There were so many people wounded, and with no medical supplies, people died from their wounds. Everyone in the street was a target for the Americans; even I saw so many civilians shot by them." He witnessed the house to house searches. "Americans did not have interpreters with them, so they entered houses and killed people because they didn’t speak English! They entered the house where I was with 26 people, and shot people because they didn’t obey their orders, even just because the people couldn’t understand a word of English. Ninety-five percent of the people killed in the houses that I saw were killed because they couldn’t speak English. Soldiers thought the people were rejecting their orders, so they shot them. But the people just couldn’t understand them!" Fasa’a described American snipers shooting civilians trying to flee the city by swimming across the Euphrates River. He also said, "I saw cluster bombs everywhere, and so many bodies that were burned, dead with no bullets in them. So they definitely used fire weapons, especially in

Julan district. I watched American snipers shoot civilians so many times. I saw an American sniper in a minaret of a mosque shooting everyone that moved.65

Corporal Leduc described a tactic called "reconnaissance by fire, which meant if for any reason we felt unsafe or unsure going into clear a house or a building, we were granted the ability to do anything we wanted to that house before we entered it... we were operating under the assumption that everyone was hostile."66 The press travelling with troops and soldiers in Fallujah report that in some cases U.S. soldiers were told that they could fire at anything they considered hostile. NBC news correspondent Kevin Sites reported that he heard Staff Sgt. Sam Mortimer give the permission "Everything to the west is weapons-free."67 Thus, the Vietnam era term "free-fire zone" was exchanged for the phrase "weapons-free."68 Marine Sergeant Adam Kokesh said that, "During the siege of Fallujah, we changed Rules of Engagement more often than we changed our underwear. At first it was, 'You follow the Rules of Engagement. You do what you're supposed to do.' Then there were times when it was, 'You can shoot any suspicious observer.' . . . At one point we imposed a curfew on Fallujah, and then we were allowed to shoot anything after dark."69

The use of white phosphorus shells caused some controversy in the U.S. and the U.K. A Pentagon spokesperson, Lieutenant Colonel Barry Venable told the BBC in a 2005 interview that the use of white phosphorus in Fallujah was legal: "White phosphorus is a conventional munition. It is not a chemical weapon. They are not outlawed or illegal. We use them primarily as obscurants, for smokescreens or target marking in some cases. However it is an incendiary weapon and may be used against enemy combatants." Venable argued that the white phosphorus shells were militarily useful. "When you have enemy forces that are in covered positions that your high explosive artillery rounds are not having an impact on and you wish to get them out of those positions, one technique is to fire a white phosphorus round into the position because the combined effects of the fire and smoke - and in some case the terror brought about the explosion

66 Leduc testimony in IVAW and Glantz, Winter Soldier Iraq and Afghanistan, p. 67.
68 Clifton Hicks testimony in IVAW and Glantz, Winter Soldier Iraq and Afghanistan, pp. 28-32: 28. Of course, in other contexts a "weapons-free" zone, is an area where weapons are absent.
on the ground - will drive them out of the holes so that you can kill them with high explosives."70
An after action review article in the military journal *Field Artillery* described the munitions used in "fire support" by the U.S. Army in Fallujah including high explosives (HE) and white phosphorus: "White Phosphorous. WP proved to be an effective and versatile munition. We used it for screening missions at two breeches and, later in the fight, as a potent psychological weapon against the insurgents in trench lines and spider holes when we could not get effects on them with HE. We fired 'shake and bake' missions at the insurgents, using WP to flush them out and HE to take them out."71

Concerns were raised during the assault that U.S. forces were not taking due care with prisoners and civilians. For instance, an NBC news video of a U.S. soldier killing an unarmed prisoner in a Mosque on 13 November, raised questions about whether the practice of "dead checking" — where the wounded are killed — was widespread in Fallujah. The Marine Corp investigated but chose not to prosecute the corporal filmed killing the wounded prisoner.72

Louise Arbour, the United Nations Human Rights High Commissioner, and former prosecutor for the International Criminal Court, raised concerns about civilian casualties in Fallujah and called for an investigation of the practices of both sides: "the deliberate targeting of civilians, indiscriminate and disproportionate attacks, the killing of injured persons and the use of human shields."73

The worst of the fighting ended by late December. In January 2005, the UN Emergency Working Group reported that although refugees had begun to return to Fallujah, access to food and medical care was limited. Further, the Emergency Working Group reported estimates that the majority of housing in Fallujah was damaged or destroyed. They estimated that 40% of buildings

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and homes were "significantly damaged" another 20% sustained "major damage", and that the remainder were "completely destroyed."\(^{74}\)

Other research suggests that there may be a much longer-term legacy of the assault on Fallujah due to the toxic chemicals. A report published in Iraq in 2008 noted higher rates of birth defects in children and more illnesses related to exposure to toxic chemicals in the years following the Fallujah attack.\(^{75}\) A later survey, undertaken to assess the validity of previous reports was published in the *International Journal of Environmental Research and Public Health* in 2010. Researchers admitted that though their survey of Fallujah households had potential shortcomings, "the results confirm the reported increases in cancer and infant mortality which are alarmingly high. The remarkable reduction in the sex ratio [an indicator biological damage] in the cohort born one year after the fighting in 2004 identifies that year as the time of the environmental contamination."\(^{76}\)

There are relatively few estimates of the number of insurgents and civilians who were killed in the April and November Fallujah assaults and disagreement about the numbers. Iraq Body Count recorded 1,874 civilian deaths in Fallujah for the period of 19 March 2003 to 19 March 2005.\(^{77}\) A United Nations agency reported in January 2005 that the head of the Fallujah General Hospital, Dr Rafa'ah al-Iyssaue described how hospital workers had recovered 700 bodies from 9 of 27 neighborhoods in Fallujah; 550 were women and children. Many others had already been buried according to Dr Rafa'ah al-Iyssaue.\(^{78}\) Bing West, who has written a popular account of the US operations in Fallujah describes the damage to physical infrastructure and U.S. dead and wounded, but does not mention Iraqi civilian dead in summary of the damage:

> In the month of April, 150 air strikes had destroyed 75 to 100 buildings. In November the damage was vastly greater. There were 540 air strikes and 14,000 artillery and mortar shells


fired, as well as 2,500 main tank gun rounds. Eighteen thousand of Fallujah's 39,000 buildings were damaged or destroyed. In the November attack 70 Americans were killed and 609 wounded.79

Elsewhere in his account of Fallujah, West writes of a "high ranking" U.S. General who came to Fallujah in late November 2004 to view the city. West writes of the unnamed general being driven through the city. "After several minutes he told the driver to stop. He got out and looked up and down the streets, at the drooping telephone poles, gutted storefronts, heaps of concrete, twisted skeletons of burnt-out cars, demolished roofs, and sagging walls. 'Holy shit," he said."80

Conclusions

As the above case suggests, the violence of war in Iraq has waxed and waned, and in Fallujah, hit a particularly awful peak in 2004. The arguments about method may seem silly in the face of such awful devastation. But if we must quantify the killing, it is necessary in this case to choose a method of accounting. Although much might be learned from careful cluster sampling, I have chosen to base my estimate for the total number of civilians killed in Iraq on the IBC method of recording of civilian death as the most transparent and up to date. Using their figures of about 110,000 killed since the start of the war, and their estimate that the WikiLeaks documents would add about 15,000 more deaths, I estimate about 125,000 direct civilian deaths in Iraq for the period of March 2003 to late December 2010.

I further estimate that another about 20,000 Iraqi combatants and police have died since the March 2003 invasion. This figure includes the Project on Defense Alternatives estimated in October 2003 that about 9,200 Iraqi combatants (plus or minus 1,600) died in the first part of the war.81 USA Today reported in 2007 that about 19,000 insurgents had been killed from June 2003 to September 2007. To this I add the Brookings Iraq Index reporting that about 10,000 Iraqi Police and Army were killed from June 2003-2010. See Table 1.

79 West, No True Glory, pp. 315-316.
80 West, No True Glory, p. 316.
Table 1. Army and Police Fatalities in Iraq, June 2003-2011\textsuperscript{82}

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Army and Police Fatalities</th>
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<tbody>
<tr>
<td>June 2003-04</td>
<td>1,300</td>
</tr>
<tr>
<td>2005</td>
<td>2,545</td>
</tr>
<tr>
<td>2006</td>
<td>2,091</td>
</tr>
<tr>
<td>2007</td>
<td>1,830</td>
</tr>
<tr>
<td>2008</td>
<td>1,070</td>
</tr>
<tr>
<td>2009</td>
<td>515</td>
</tr>
<tr>
<td>2010</td>
<td>468</td>
</tr>
<tr>
<td>Total</td>
<td>9,819</td>
</tr>
</tbody>
</table>

Thus the total estimate for Iraqi civilian and military direct military deaths is about 165,000. It is not possible to estimate the number who have died because of the indirect effects of war. If we add the nearly 5,000 coalition soldiers, journalists and aid workers who have died in Iraq, the entire conflict has taken at least 170,000 lives in direct violence.

The following appendix discusses some of the controversies about the methods and the results of various counts and estimates. Again, the emphasis here has been on the Iraqi dead and wounded. It is not that the controversies don't matter — they do. It is better however to keep in mind that the total death toll is large, and the devastation — in terms of wounded individuals and mental health problems, and continued displacement should overshadow the controversies.

Appendix A: Documenting and Counting

The best method for documenting the direct casualties of war in Iraq — killed and wounded by violent means — from 2003 to the present would be an official recording of the dead and injured as those casualties occurred.\textsuperscript{83} Such a registry was not available at the outset of the war in March 2003, nor have subsequent efforts to document the killed and wounded been consistently able to use official sources to supplement published accounts in the news media. Further, the United States military has not made a complete count of the dead, although, as described below, it did recently make a count for part of the war available.

\textsuperscript{82} Brookings, "Iraq Index," 29 May 2011, p. 4.

Official estimates for some periods of the war are also available. For instance, the U.S. estimate for Iraqi casualties, given in late 2010 by the U.S. Central Command, is 76,939 Iraqi security and civilians killed, and 121,649 wounded for the period of January 2004 to August 2008. They do not disaggregate between civilian and combatant deaths. In October 2009, the Iraqi Ministry of Human Rights gave an estimate of 85,694 people killed and 147,195 wounded for the period January 2004 to 31 October 2008. Hannah Fischer of the Congressional Research Service suggested that the Ministry figures only included those who died as a result of insurgent attacks or displacement, suggesting that they did not include deaths due to fighting between groups within Iraq or due to the US and other coalition forces occupation of Iraq.

Because the official estimates were for a long time lacking and are incomplete, for example because they do not cover the entire period of the Iraq war, scholars concerned to understand the human toll of the war were left to use media accounts of individual incidents, occasionally supplemented by official statements. Later, public health experts conducted sample surveys in Iraq and estimated the numbers killed by violence and the number of "excess deaths" by using sophisticated statistical methods. The advocates of cluster sample surveys argue that their methods for estimating casualties will produce a more accurate picture of the dead and wounded. The advocates of recording reported casualties say that sample survey methods suffer from methodological problems.

To a certain extent, the dispute between advocates of different approaches has focused attention on the controversies about counting rather than on the dead and wounded in Iraq. For example, the results of two cluster sampling surveys, published in the Lancet, were both widely published but also highly criticized. The Lancet studies estimated very high numbers of civilians killed by violence in Iraq. For example, the second Lancet, gives range of between 426,000 and

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793,000 killed after the invasion through 31 July 2006. More specifically, the authors estimated about 655,000 excess deaths, of which they suggested some 601,000 were due to violent causes. An even higher figure for violent death—more than 1 million killed—was produced by the Opinion Research Bureau (ORB), based in Britain, in 2007 and updated in 2008.

But both the ORB and Lancet studies were highly criticized on methodological grounds. For instance, one of the main critiques of the Lancet estimates focused on the question of whether the samples were random. Because of the problems associated with random sample surveys in a war zone, at least some scholars have concluded that it may be that the Lancet study was the best that could be done given the extreme violence in Iraq at the time. But, given the methodological criticisms of this research, and the fact that it has not been up-dated, I have chosen not to rely on their data. Further, given the several years that have elapsed since the initial work, new sample surveys should be conducted. Most important, survey research and cluster sampling suggests that reliance on media reports of death undercount the true number of dead.

The other method used to estimate direct death of civilians in Iraq, as described above, relies on cross checking media reports and supplementing those reports with morgue and hospital accounts. In this way, Iraq Body Count enumerates each incident of civilian killing, using publicly available data. As I noted above, IBC has since the beginning of the conflict regularly scanned more than two hundred media sources and crossed checked their data. Iraq Body Count acknowledges that their numbers are likely an undercount. They have also noted that they found new information on civilian deaths in the WikiLeaks releases.

John Tirman of MIT suggests that media reported numbers are misleadingly low and specifically criticizes Iraq Body Count: "IBC’s count, however widely cited, is accumulated by scanning mainly English-language news media reports. It’s a crude method, given that not all deaths are reported in the news media, the number of reporters and their interests change over time, and most of the press was stuck in Baghdad during the most severe violence in 2004-07.

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90 Daponte, "Wartime Estimates of Iraqi Civilian Casualties."

26
IBC itself acknowledges that they are probably low by a factor of two, meaning their count should be 200,000 and the new data would make that at least 215,000. Even then, IBC does not count “insurgents” or security forces, or non-violent deaths that are attributable to the war."\(^{91}\) The Brookings Institution makes estimates based on the Iraq Body Count, but adjusts them to reflect figures released by the Iraqi and U.S. governments.\(^{92}\)

But supplementing the IBC numbers with Wikileaks data and official reports may still produce a number for civilian direct death that is too low. Iraqi officials at the Ministry of Health may have been systematically encouraged to under-report deaths. One person who works at the Baghdad central morgue statistics office told National Public Radio in that "By orders of the minister's office, we cannot talk about the real numbers of deaths. This has been the case since 2004... I would go home and look at the news. The minister would say 10 people got killed all over Iraq, while I had received in that day more then 50 dead bodies just in Baghdad. It's always been like that — they would say one thing, but the reality was much worse."\(^{93}\)

Despite the potential for undercounting, the Iraq Body Count dataset is still the most transparent and comprehensive recording available of civilian deaths in Iraq since 2003.

Even less likely to be accurate is the count of the number of "insurgents killed in the Iraq war. One 2007 report, in USA Today cited the Multi-National Corp Iraq figures for enemy fighters killed from June 2003 to 22 September 2007 as 18,882 as of 22 September 2007.\(^{94}\)

### Multi-National Force Iraq Count of Insurgents Killed

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<thead>
<tr>
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<tbody>
<tr>
<td>June 2003-December 2003</td>
<td>597</td>
</tr>
<tr>
<td>2004</td>
<td>6,807</td>
</tr>
</tbody>
</table>


\(^{92}\) "Information for May 2003-December 2005 is based upon data from Iraq Body Count. The data for war-related fatalities was calculated at 1.75 times our IBC-based numbers, reflecting the fact that estimates for civilian casualties from the Iraqi Ministry of the Interior were 75 percent higher than those of our Iraq Body Count-based estimate over the aggregate May 2003 – December 2005 period. During this time, we separately studied the crime rate in Iraq, and on that basis estimated 23,000 murders throughout the country. In order to add these back in to our estimate, we used estimated monthly murder rates for Baghdad as a guide in proportionally allocating these 23,000 additional fatalities. CENTCOM, Unclassified briefing slides (monthly through April 2010).\(^{3}\) Michael E. O’Hanlon, and Ian Livingston, "Iraq Index: Tracking Variables of Reconstruction & Security in Post-Saddam Iraq," Brookings Institution, 9 December 2010, pp. 3 and 44.


<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
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<tbody>
<tr>
<td>2005</td>
<td>3,247</td>
</tr>
<tr>
<td>2006</td>
<td>3,942</td>
</tr>
<tr>
<td>January 22 September 2007</td>
<td>4,882</td>
</tr>
</tbody>
</table>

**Appendix B: Sources**


Iraq Family Health Survey (2008b) IFHS web site. [http://www.emro.who.int/iraq/surveys_ifhs.htm](http://www.emro.who.int/iraq/surveys_ifhs.htm).


