

Death in Iraq:

A Critical Examination of the *Lancet* Paper

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Brief Analysis

Even the most optimistic observers have come to see Iraq as a violent place; the level of violence—and resulting death rate—has only increased. Estimates of the numbers killed since the overthrow of Saddam Hussein’s regime continue to rise. Incident levels, another important measure of violence, have also increased over the course of the postwar period and appear to be increasing at an even greater rate in 2006. A paper published in the October 2006 issue of the *Lancet* (“Mortality after the 2003 Invasion of Iraq” by Gilbert Burnham, Riyadh Lafta, Shannon Doocy, Les Roberts) provides yet another indication of the increased level of violence in Iraq.

The paper’s assessment of regional violence and its effects has drawn a range of reactions, from outright dismissal to strong support. It has now entered the debate on Iraq, as much of the commentary is driven by political readings of its data and conclusions. The paper should definitely not be dismissed out of hand; however, it may suffer from some methodological and analytical weaknesses. (These “scientific” concerns could be readily addressed with public access to the sample data.) In addition, it seems to display some bias in its interpretation of data, especially in its attribution of responsibility for the violent deaths in Iraq. It also includes several potentially biased and controversial statements about the coalition.

How Many Have Died?

Much of the commentary on the paper has focused on the estimated number of Iraqis—about 655,000—who have died as a result of the war. The study attributes more than 601,000 of these deaths to violent causes. The substantial gap between this and other estimates has led to attacks on the paper’s conclusions and methodology. It has also led many observers to make immediate use of the paper in the political debate over the war and its consequences.

Much of the commentary has skipped over the fact that the study presents a range of numbers (from approximately 393,000 to 943,000 deaths) rather than a single figure. Nevertheless, even the lower end of this range is substantially higher than any other estimate, as the study acknowledges. These figures are based on household survey data, which provided a sample (1,849 households) projected to the national level. Although the survey appears to have been conducted according to standard practices, some results do not seem plausible. For example, the numbers projected by the study would require the violent death of approximately 500 Iraqis per day for 1,200 days. Furthermore, given

the study's estimates of violent deaths concentrated in a few provinces, daily death rates in these areas would have to be substantially larger than 100 per day for prolonged periods of time.

Nothing we know about the conflict in Iraq supports this rate of violent death. There may have been a few periods when that rate was achieved, or even surpassed (e.g., in November 2004 when the conflict with the Sunni insurgents reached a peak in Falluja and Mosul), but such intense episodes of combat have been infrequent. Killing people in large numbers is not easy, short of employing weapons of mass destruction, and in the media fish bowl of Iraq things cannot stay hidden for long, as exemplified by the stories of atrocities committed by U.S. personnel. This is not to say, however, that other lower estimates are any better—many appear to be markedly undercounting fatalities.

Who Is Dying?

The study makes no attempt to separate the deaths of combatants from those of noncombatants. In war, whether conventional, guerrilla, or civil, it is expected that combatants will be killed. The paper indicates that violent death in Iraq occurs primarily among males of military age (15 to 44 years old). Although this group represents only 24.4 percent of the Iraqi population, it accounts for 59 percent of the violent deaths in the sample. The concentration of violent deaths among males rises still higher if the 45-to-59 age group is included; males of age 15 to 59 account for probably 80 percent of total violent deaths. According to the paper, the ratio of men to women killed is 9.8 to 1.

In other words, while the media has often highlighted deaths among women and children in Iraq, the findings of the paper emphasize that it is mainly males who are dying, and specifically those one would expect to find, based on their sex and age, among Sunni insurgents, Shiite militia members, or Iraqi Security Forces (ISF) personnel. This suggests that the violence is concentrated among combatants or potential combatants and is less indiscriminate than is often portrayed.

Who Is Killing Them?

There are several wars underway in Iraq, and it is often difficult to tell who has been killed by whom. Nevertheless, the study could have better analyzed who is responsible for these deaths. It holds the coalition broadly responsible for all excess deaths (those beyond what would be expected if the war did not occur), based on the idea that by invading the country and toppling the regime, the coalition created conditions for dramatically increased violence.

Beyond this broad responsibility, the study attributes 31 percent of violent deaths specifically to coalition forces; these figures are mainly based on the statements of surveyed Iraqis. The paper does not indicate which sectors of the Iraqi population suffered these casualties, or how. Given that coalition forces were engaged in various levels of direct combat with insurgent and sometimes militia forces throughout the time surveyed, most of those killed by the coalition were likely insurgents or Mahdi Army members. Accounts of direct fire engagements between coalition forces and insurgents or militiamen occasionally reveal civilian casualties, including women and children. But far more often they describe the killing of the insurgents and militia involved, sometimes in large numbers, as in Najaf in August 2004 when coalition forces fought sustained engagements with the Mahdi Army. The motivation behind survey respondents' attribution of Iraqi deaths to the coalition raises an important credibility issue. It seems plausible that both Sunnis and Shiites would blame coalition forces, especially when talking to Iraqis they do not know.

The Lancet paper presents a large category, "unknown," as the agency responsible for the most violent deaths (45 percent), and a smaller category titled "other" as responsible for many more (24 percent). This may leave one wondering who is doing all the killing. It is surprising that in the last period of the survey, June 2005-June 2006, Sunnis and Shiites often did not attribute deaths to each other. In reality, the period since February 2006 has featured serious sectarian violence, and neither group seems unwilling to blame the other. The study does not

attribute violent deaths to what are well understood as two of the primary agents of violence in Iraq—the Sunni insurgents and Shiite militia. The study found that 13 percent of violent deaths resulted from car bombs; a high percentage of these could have been attributed to Sunni insurgents, who are, with little exception, the only Iraqi agents that use this technique.

According to the study's data, 69 percent (74 percent in the last time period) of violent deaths were caused by agents other than coalition forces, suggesting that the coalition is only one element, and not even the most important, contributing to the killing. Although the paper does point out that coalition forces are not responsible for most of the violent deaths, the failure to provide some meaningful commentary as to who is to blame, beyond the coalition, unreasonably emphasizes the “one-third” coalition responsibility while glossing over the “two-thirds” Iraqi responsibility.

How Are They Dying?

Iraqis are being killed in a variety of ways, from individual throat cutting to largely indiscriminate suicide bombing. The paper provides rough categories of causes of death, but these are poorly defined and make analysis difficult. Given the effects of modern weapons on human bodies, it may have been difficult in some cases for survey respondents to clearly distinguish among causes of death.

The paper points to gunshot wounds as the primary cause of violent death without clearly defining what falls into this category, and further suggests a connection with executions, assassinations, and the coalition targeting of military-age males. These explanations hardly account for the numbers killed as estimated by the study. If some 600,000 Iraqis died violently and 56 percent of those deaths were from gunshot wounds, that would amount to some 336,000 Iraqis killed by gunshot. If the coalition caused 31 percent of gunshot-related deaths, that would mean that coalition forces have gunned down some 104,160 Iraqis, or approximately 87 per day for more than 1,200 days. On the face of it, those figures are simply not credible. There were periods in which significant numbers of Sunni insurgents and Mahdi Army members were killed, including the second battle of Falluja and the April and August 2004 clashes with the Mahdi Army, but fighting at that intensity has been rare. Similarly, the data suggests that Iraqis have killed more than 231,000 other Iraqis by gunshot, or approximately 193 per day. These figures also do not seem credible.

A similarly vague category is “other explosion/ordnance.” This appears to refer to explosions other than car bombings, but the term “ordnance” is so broad that it precludes any meaningful interpretation. It could include all types of heavy weapons such as vehicle-mounted cannons, mortars, artillery rockets, and so on. The relatively small number of casualties (14 percent) inflicted by these weapons, as indicated in the survey data, suggests that coalition forces, which have a preponderance of heavy weapons, are not using them indiscriminately—a finding that would have been useful to report.

Airstrikes are the only category that can be clearly attributed to coalition forces, but even here there is room for ambiguity. Iraqis have on occasion described incidents involving improvised explosive devices (IEDs), mortar fire, and artillery rocket fire as airstrikes and blamed them on the coalition. The relatively small percentage of Iraqis (13 percent) reportedly killed in airstrikes suggests that the coalition is also not employing airpower indiscriminately, and the study itself suggests that such incidents are causing a declining percentage of violent deaths.

Where Are They Dying?

Overall, the study finds high levels of violent deaths where they would be expected—in the Sunni provinces and the mixed province of Diyala. The study concludes that the highest level of violent deaths—more than 10 per 1,000 residents per year—are in the Nineveh, Salah al-Din, Anbar, and Diyala provinces. Surprisingly, Baghdad does not fall into the most violent category according to the survey results. The study points to other provinces as areas of

substantial violence (2 to 10 violent deaths per 1,000 per year). These include Tamim, home to the increasingly violent city of Kirkuk, and Basra and several other Shiite provinces in the south, where a mélange of Shiite groups are fighting for power and occasionally engaging coalition forces. In this regard, the paper does not support coalition statements that most of Iraq is relatively free of violence.

Methodological Questions

A serious scientific effort must be as transparent as possible in its methodologies and empirical results. Further evaluation of this study would benefit from additional clarity and detail concerning the actual sample data and the mathematical analyses used to arrive at the statistical results. Examples of methodological issues include the following.

First, the study compares results from three fourteen-month periods after the invasion to results from only one fourteen-month period before the invasion—and that period is the one immediately preceding the invasion, when the Iraqi regime was preparing for war. How representative of violent activity in Iraq is that one preinvasion period? Would looking at three periods before the invasion improve the study's credibility? Second, only two violent deaths were reported in the survey data during the fourteen months prior to the invasion. This seems questionable considering the regime's prewar security operations and the low-level insurgency being waged in the south. Is this very low baseline of violence, in a regime known for violent activity, plausible? Third, it would be useful to know more about how representative the study's random sampling process was. Where were the clusters of surveyed households located, and what were the actual numerical results for each cluster? If violent deaths are positively correlated with population density, would random selection of cluster locations proportionate to population size cause an upward statistical bias in the results (when projected over the country as a whole)? Finally, no mention is made of public access to the body of data collected. Public access would allow other experts to attempt replication of the results—a critical requirement for scientific credibility.

Conclusion

Overall, the study demonstrates that the conflict in Iraq touches broad sectors of the population, that violence is a problem in large parts of the country, and that the level of violence is increasing. The study's methodological problems may not be trivial. The fact that the study does not better analyze and define the agents behind the increased violence raises concerns about its credibility, as do several tendentious and nearly polemical statements in the body of the article. For example, to argue that Iraq is "the deadliest international conflict of the 21st century" is not saying much—the century is only six years old, and if one looks back 100 years, Iraq does not look like a major conflict.

In war, people die—often in large numbers. And in twentieth-century warfare, the percentage of civilians dying increased. War is no longer fought away from population centers, if it ever was. In Iraq the war is being fought within population centers, and civilians are routinely involved in the fighting. There is no easy way to separate the combatants from the population. Both Sunni insurgents and Shiite militia emerge from the cover of the populace, conduct their actions, and fade back among civilians. Militias use the Iraqi police as a cover for death-squad actions. In many cases the Iraqi populace supports, willingly or unwillingly, the armed elements operating from within it. The death of Iraqis is not a byproduct of an international conflict in which they are only tangentially involved. Iraqis are intimately and intrinsically participating in the conflict. Not all of them, of course, but a great many Iraqis are the gunmen, the bombers, the expeditors, the militia leaders, and the support base for these active agents in the war. The notion that the coalition is the primary driver of violence is no longer correct. The war in Iraq is an increasingly Iraqi war, and one that the various Iraqi constituencies can halt should they choose to.

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