LESSON FROM MOSUL AND RAQQA: NEXT TIME, DO "EVERYTHING POSSIBLE" TO REDUCE CIVILIAN CASUALTIES

WRITTEN TESTIMONY BY DR. LARRY LEWIS

Summary: *Any effort to assess the effectiveness of UK military operations in support of partner forces retaking Mosul and Raqqa should include consideration of the civilian toll from those operations. The UK Ministry of Defence has repeatedly said that it does "everything possible" to avoid civilian casualties. But more can be done. This paper addresses how the UK government can learn from the challenges seen in Mosul and Raqqa and improve in avoiding, responding to, and acknowledging civilian casualties. It is a path toward keeping the promise of doing "everything possible."*

I am with CNA, a US research organization that takes academic types and retrains them for operations research and solving military problems. My remarks are based on my experience analyzing the waging of warfare, and particularly my research on understanding and reducing the costs of warfare, including civilian casualties. I have studied how civilian casualties take place and worked with militaries on how better to avoid them—in Afghanistan, Iraq, and Syria, and with the Saudi-led coalition regarding operations in Yemen. I also spent two years at the State Department to apply my technical expertise to national security policy.

Your inquiry examines the effectiveness of UK military actions in support of the recapture of Mosul and Raqqa from Daesh/ISIS. These cities have been successfully recaptured, an effort in which a multinational coalition worked with partner forces on the ground to regain urban cities held by an irregular and unprincipled force. The fact that the populations in these urban areas are no longer living under a reign of terror is in itself a measure of effectiveness. At the same time, international observers visiting in the cities in the aftermath of operations have been taken aback by the scale of damage: some said they hadn't seen major cities so devastated by combat since World War II. [1] We also hear government estimates of civilian casualties that are both very low

in magnitude and quite different from independent estimates such as those provided by Airwars. [2] This situation prompts a series of questions:

- What was the cost to the civilians living in Mosul and Raqqa when the coalition, including the UK, successfully retook the cities?

- Does the UK understand this cost, and if not, what is needed to accurately characterize it?

- Finally, are there ways to reduce this cost to civilians in future operations?

Many have commented that the official coalition civilian casualty numbers for Iraq and Syria are strikingly low and unrealistic given the nature of the conflict in 2017—primarily an urban fight waged largely with air-to-ground munitions. Past analyses have shown military civilian-casualty estimates to be too low in general, just as independent estimates tend to be too high. This stems from challenges of detecting civilian casualties with available military capabilities. The context of the Mosul and Raqqa campaigns exacerbated this detection challenge, featuring attacks on buildings using airborne sensors, with few or no boots on the ground. This detection problem means that when coalition nations such as the UK operate with these tactics, they will not be able to reliably identify when civilian casualties occur based on their own available information. And when they do identify civilian casualties, there is no guarantee that the accounting is complete. For example, the military may have full-motion video showing several civilians killed but not be aware of dozens more buried in the rubble.

This detection problem was a challenge across the coalition, but the UK appears to have been particularly affected. Since the UK's Operation Shader has been the second-largest contributor to the air campaign in Iraq and Syria, with over 1700 strikes over four years, the official UK reporting of one civilian casualty from those strikes

---

1. Patrick Cockburn, US, Britain and France inflicted worst destruction 'in decades' killing civilians in Isis-held city of Raqqa, report says, the Independent, June 5 2018**.**

2. Samuel Oakford, They're Still Pulling Bodies Out of ISIS' Capital, the Daily Beast, March 12 2018.

strains credulity.[3] At the very least, this means that the civilian casualty rate for UK strikes is dramatically lower than that for the coalition as a whole, and is also significantly lower than the lowest rate observed previously in Afghanistan under ISAF. Given that many of these airstrikes were in an urban setting with increased collateral risks, historically speaking it is most likely that this low number is at least in part from poor detection of civilian casualties when they occur.

There are two ways to remedy this situation. Militaries in nations like the UK can bolster their own capabilities to detect civilian casualties post-strike. This can include using drones like Reaper and Predator for post-strike monitoring, since they are able to detect civilian casualties when fighter aircraft cannot. They can also work more closely with independent groups to better consider external information to complement military assessments. A first step in this direction would be to not dismiss external allegations out of hand simply because they cannot be verified by military information sources. Both of these information sources would help with the detection problem. A more comprehensive set of information would put militaries in a better place to evaluate the effects of their operations.[4]

Low reported civilian casualty numbers are not just a matter of getting the numbers right. They are also a symptom of a bigger problem: the systemic difficulty of anticipating the likelihood and magnitude of civilian casualties when planning and conducting attacks. This problem in anticipating civilian casualties is seen in cases where the coalition was surprised by external reports—such as an airstrike in Mosul in March 2017, which the US later investigated and found had killed 105 civilians.[5] At the time of the strike, planners were unaware that civilians were present.

The March 2017 incident in Mosul also illustrates another point: that the risk of civilian casualties during coalition operations in both Mosul and Raqqa was heightened by the nature of working with partner forces.

Their limitations in proficiency, lower-level capabilities, and different tolerances for risk affected the pace of operations as well as the determination of military necessity. In Iraq, Afghanistan, Syria, and Yemen, whether with nation-state partners or with non-state groups, it is clear that more attention is needed on civilian protection considerations for partner forces. Giving forces a weapon and a Law of Armed Conflict brief is not sufficient for managing outcomes.

We can be more deliberate about how we work with partner forces. This includes work in planning and shaping operations, in training and equipping partner forces, and in tactical execution. An example would be building in additional safeguards to ensure that collateral effects are sufficiently considered.[6] We can also work with partner forces to help address a challenge exacerbated in urban settings: explosive weapons with reverberating effects that impact essential services such as water and power. While the UK and other members of the coalition considered civilian casualties prior to strikes, those second-order effects were not considered in the same way, negatively impacting the welfare of the population. Using the knowledge of partners to avoid damaging infrastructure is a way to leverage the collective strengths of the technologically advanced and proficient militaries like the UK and their local partners.

Another lesson seen in Mosul and Raqqa—a lesson indicated but yet not learned—is the need to monitor civilian casualty trends and make operational adjustments in stride. This was practiced in Afghanistan, where both the ISAF civilian-casualty tracking cell and US lessons-learned personnel monitored trends, and efforts were made to address areas of concern.[7] For example, after the completion of the Joint Civilian Casualty Study in August 2010, I continued to receive updated civilian-casualty data from ISAF and used that data to determine trends and potential areas of concern. In early 2011, several types of operations showed

3   Jamie Merrill, UK Parliament launches inquiry into RAF strikes on Mosul and Raqqa, Middle East Eye, May 11 2018.

4   The risks of partnering is also explored in the APPG on Drones' forthcoming report The UK's Use of Armed Drones: Working with Partners.

5   Martin Chulov, US admits Mosul airstrikes killed over 100 civilians during battle with Isis, the Guardian, May 25 2017.

6   Such a national policy could also help address some policy concerns discussed in the APPG on Drones' forthcoming report The UK's Use of Armed Drones: Working with Partners.

7   Sarah Sewall and Larry Lewis, Joint Civilian Casualty Study, August 31 2010.

increased risk of civilian casualties. After this finding was forwarded to ISAF, international forces made operational adjustments in those types of operations to address those concerns. As a result, civilian casualty trends were quickly reversed. In contrast, the rate of civilian casualties in Raqqa and especially in Mosul rose over time, and yet there were no monitoring efforts with accompanying operational adjustments to address them. This monitoring and learning function was codified in policy by the US in its 2016 Executive Order 13732 on civilian casualties.[8]

This example highlights a critical gap for the UK regarding civilian casualties: the lack of a national policy. The US goes to great lengths to avoid non-combatant casualties in its operations. Over time, it recognized that compliance with international law and military doctrine was insufficient for doing everything possible to reduce civilian casualties in its operations. The executive order creates a national policy to reflect its practices, which the US regards as more protective than the requirements of the Law of Armed Conflict. While not all elements have been fully implemented to date—for example, Section 4 on civilian-casualty monitoring has not been performed in practice—the national policy helps to focus institutions to best meet policy commitments for protecting civilians in war. The US policy codifies measures for reducing and responding to civilian casualties, tracking, monitoring, and learning from them. It also explicitly outlines the imperative to work with partner forces. The UN, in its recent annual report of the Secretary General on the protection of civilians in armed conflict, urged all nations to develop a national policy.[9] The UK would benefit from such a national policy to help address the concerns discussed here.[10]

Working hard to protect civilians in armed conflict is consistent with UK values and principles. That is reason enough to strive to learn the lessons of Mosul and Raqqa and to do better. But there is another reason to improve protections for civilians—it is smart strategy. We have seen how groups like Al-Qaeda and ISIS use civilian casualties as a recruiting tool and rallying cry.

We also see how civilian casualties in conflict can harm the conduct of a campaign by degrading the support of the host nation population, reducing freedom of action because of limitations imposed by the host government, and causing friction among coalition partners. The UK MOD has repeatedly said that it does "everything possible" to avoid civilian casualties.[11] But more can be done. This paper addresses how the UK government as a whole can have a part in better acknowledging, responding to, and avoiding civilian casualties in order to keep the promise of doing "everything possible."

---

[8] The White House, United States Policy on Pre- and Post-Strike Measures to Address Civilian Casualties in U.S. Operations involving the Use of Force, Executive Order 13732, July 1 2016.

[9] Report of the Secretary General, Protection of civilians in armed conflict, United Nations, S/2018/462, May 14 2018.

[10]   Such a national policy could help address some policy concerns discussed in the APPG's report The UK's Use of Armed Drones: Working with Partners.
[11]Josie Ensor, US-led coalition responsible for civilian death toll 'not seen since Vietnam' in fight against Isil, the Telegraph, May 22 2018.

DR. LARRY LEWIS

Dr. Lewis has worked extensively to reduce civilian casualities in military operations, leading multiple studies to determine why civilian casualties happen and develop tailored, actionable solutions. This includes his role as lead analyst and co-author (with Dr. Sarah Sewall) for the Joint Civilian Casualty Study (JCCS), which GEN Petraeus described as "the first comprehensive assessment of the problem of civilian protection." He contributed to the U.S. national policy on civilian casualties and has worked with partners to improve policy and practice to better protect civilians (e.g., the United Nations, Afghanistan, Saudi Arabia). Dr. Larry Lewis directs the Center for Autonomy and Artificial Intelligence at CNA.

CNA CENTER FOR AUTONOMY AND AI

CNA's Center for Autonomy and AI supports the U.S. goal of effectively incorporating autonomy, AI, and related technologies into military capabilities. Autonomy and AI represent revolutionary technologies in warfare which offer opportunities to the U.S. for countering and deterring emerging threats, addressing security challenges and advancing U.S. national interests. But this opportunity is by no means certain, since autonomy also offers potential asymmetric advantages to near-peer competitors, some of which have been pursuing these capabilities aggressively. Likewise, rapid innovation in the private sector and a commercial research and development sector dwarfing that of the U.S. military create new challenges for the U.S., which will need to quickly identify and integrate cutting edge technological developments in this rapidly changing environment.

Because of the foundational impact autonomy and artificial intelligence will have on the character of warfare, CNA created the Center for Autonomy and Artificial Intelligence to focus on these emerging technologies and their contribution to national security. The Center capitalizes on the ability to leverage the scientists and analysts of CNA's staff of nearly 700, with their experience base in military operations, test and evaluation, security and intelligence analyses, technology assessment, and autonomy and AI.

ABOUT CNA CORPORATION

CNA is a not-for-profit research and analysis organization with 75 years of experience providing government agencies with data-driven insights and real-world, actionable solutions grounded in our direct experience with the operational environments where these solutions are applied. CNA developed the foundational techniques for operational analysis to address complex challenges facing government programs. We have applied these techniques successfully in areas ranging from defense to aviation, education, justice, and homeland security.

For more information please contact:
Dr. Larry Lewis, Director, Center for Autonomy and AI
703-824-2020
Lewisl@cna.org

Ms. Cheryl B. Rosenblum, Sr. Dir. Strategic Development
703-824-2526
rosenblc@cna.org