INTERNATIONAL
REVIEW
of the Red Cross

Humanitarian debate: Law, policy, action

War in cities

ICRC

Aim and scope

Established in 1869, the *International Review of the Red Cross* is a peer-reviewed journal published by the ICRC and Cambridge University Press. Its aim is to promote reflection on humanitarian law, policy and action in armed conflict and other situations of collective armed violence. A specialized journal in humanitarian law, it endeavours to promote knowledge, critical analysis and development of the law, and contribute to the prevention of violations of rules protecting fundamental rights and values. The *Review* offers a forum for discussion on contemporary humanitarian action as well as analysis of the causes and characteristics of conflicts so as to give a clearer insight into the humanitarian problems they generate. Finally, the *Review* informs its readership on questions pertaining to the International Red Cross and Red Crescent Movement and in particular on the activities and policies of the ICRC.

International Committee of the Red Cross

The International Committee of the Red Cross (ICRC) is an impartial, neutral and independent organization whose exclusively humanitarian mission is to protect the lives and dignity of victims of war and other situations of violence and to provide them with assistance. It directs and coordinates the international activities conducted by the International Red Cross and Red Crescent Movement in armed conflict and other situations of violence. It also endeavours to prevent suffering by promoting and strengthening international humanitarian law and universal humanitarian principles. Established in 1863, the ICRC is at the origin of the Movement.

Cover Photo: A Kurdish marksman stands on top of a building overlooking the destroyed Syrian town of Kobane, also known as Ain al-Arab, on 30 January 2015. Credit: BULENT KILIC/AFP.

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EDITORIAL

WAR IN CITIES: THE SPECTRE OF TOTAL WAR
Vincent Bernard, Editor-in-Chief

A scene of devastation, blanketed with grey dust, stretches into the distance in eerie silence. Walls riddled with bullets, buildings collapsing in on themselves, external walls blown away to reveal an intimate view of a bedroom or living room, streets blocked by piles of rubble.

These sickening images of destruction – filmed from above by drones and shared on social media – probably best symbolize the current resurgence in urban warfare. Other images come to mind: bombed-out hospitals, children being pulled from wreckage, snipers roaming the maze of tunnels and walkways that have been blasted through the walls of now-uninhabited houses.

Contrasting starkly with these often deserted urban scenes of destruction are the pictures of overpopulated camps and makeshift boats brimming over with men, women and children. City-dwellers are often forcibly evacuated or driven to flee by conflict or hardship, with no choice but to leave behind their work, their relationships and the safety of their homes.

But not everyone can or wants to flee. For those who remain, life often becomes extremely dangerous and precarious when the complex fabric of urban services disintegrates: power, water and food supplies are cut off, leading to isolation, cold, darkness, illness and anxiety about what tomorrow may bring. As schools, businesses and shops close, people's future prospects disappear. Bombs – through negligence, error or criminal intent – strike people and the infrastructure they need to survive.

Gaza, Sana'a, Ramadi and Aleppo have recently joined the long list of cities that have been devastated by warfare throughout history, and other cities in Syria and Iraq may soon go the same way. After an issue dealing with how war has changed, and with future editions due to cover displacement, migration and the conflict in Syria, the *International Review of the Red Cross* felt the need to address the subject of urban warfare, not just because of the humanitarian crises that are continuing to unfold, but because urbanization is an unstoppable trend. Tomorrow's wars will inevitably take place in urban areas, where more than half of the world's population now lives. According to the United Nations (UN) *World Urbanization Prospects* report, urban population growth is accelerating. Only 30% of the world's population lived in cities in 1950, but the figure was 54% in 2014 and is projected to rise to 66% in 2050.[1]

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1   UN Department of Economic and Social Affairs, Population Division, *World Urbanization Prospects, the 2014 Revision: Highlights*, 2014, available at: https://esa.un.org/unpd/wup/Publications/Files/WUP2014-Highlights.pdf (all internet references were accessed in February 2017).

In 2010, the *Review* dedicated an issue to instances of urban violence that do not reach the threshold of armed conflict.[2] In this issue we have chosen to focus on urban conflicts which do reach that threshold, dealing with the operational and political issues, the rules governing the methods and means of warfare, and the challenges in providing a humanitarian response.

War in cities: a microcosm of total war

Until the twentieth century, the standard model of war on land involved two main types of military operation: a confrontation on a battlefield in open country, or a siege of a city or fortress. The cities of Europe and Asia were protected by fortifications that were manned by troops when attacked, requiring the attacker to mobilize a greater force and commit to an operation that often proved long and costly if the city had sufficient provisions.

A little like an insect that has a shell but no internal skeleton, a city's defences were concentrated around its perimeter. Streets and buildings very rarely turned into battlefields, except during popular uprisings such as the Paris revolutions with their barricades. Once the besieging force broke through the ramparts, the whole city fell into its hands. This happened to Rome and Constantinople on several occasions. Jerusalem was besieged forty times and completely destroyed on two occasions.[3]

Despite the perception that more civilians were spared in past wars than in modern wars, the fate of a city's population during these sieges was inextricably linked with that of its defenders. Up to the time of the Napoleonic wars, a victorious military commander would allow or even encourage his troops to pillage the city.[4] The population was then subjected to all kinds of violence, and sometimes enslaved or completely massacred, as in the Bible's description of the fall of Jericho: "And they utterly destroyed all that was in the city, both man and woman, young and old, and ox, and sheep, and ass, with the edge of the sword."[5] In that vein, ancient and medieval siege warfare could be seen as the precursor to genocide and total war.

Urban warfare as we know it today was relatively rare until the twentieth century, only really coming to prominence during the Spanish Civil War and the Sino-Japanese War in the 1930s. From Barcelona to Fallujah, via Huế and Grozny, the tactics involved in street battles have hardly changed.[6] A city's outer walls are no match for modern artillery and getting through them is no longer a problem, so it is the urban fabric itself that becomes the battleground. Buildings

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2   *International Review of the Red Cross*, Vol. 92, No. 878, 2010.
3   Jean Lartéguy, *Mourir pour Jérusalem*, Éditions de Fallois, Paris, 1995, p. 5.
4   See Gavin Daly, "Plunder on the Peninsula: British Soldiers and Local Civilians during the Peninsular War, 1808–1813", in Erica Charters, Even Rosenhaft and Hannah Smith (eds), *Civilians and War in Europe, 1618–1815*, Liverpool University Press, Liverpool, 2012, pp. 211–212.
5   Joshua 6:21.
6   See Alexandre Vautravers, "Military Operations in Urban Areas", *International Review of the Red Cross*, Vol. 92, No. 878, 2010.

become bunkers, sewers become communication routes, and fighting takes place at very short range in a three-dimensional space, between buildings, between floors and between rooms.

It was also in the 1930s that the first large-scale aerial bombardments took place. In Europe, the bombing of Guernica, a small town in Spain's Basque Country, caused international outrage. Yet, nearly all belligerents of World War II soon followed that example and engaged in bombing the cities of their enemies.

The indiscriminate bombing of cities was not only a violation of international humanitarian law (IHL)[7] but was ineffective as a way of overcoming an opponent's resistance. The Blitz – the Luftwaffe's bombing of London in the Second World War – failed to bring Britain to its knees. Similarly, Germany's industrial capacity grew constantly during that war,[8] despite ever more intensive air raids. Bombing cities is even counterproductive in some cases:[9] it can strengthen people's desire to take revenge and can divert military resources towards targets that are of no military interest. The terrible siege of Leningrad only contributed to rallying the Russians against the Nazi invasion. Worse, a ruined city gives a number of tactical advantages to its defenders, as the German army found to its cost in the so-called War of the Rats (*Rattenkrieg*) in Stalingrad. Nevertheless, in the Second World War, the belligerents used the concept of "total war" to justify bombing the enemy's urban, industrial and commercial centres. As a result of that strategy, and in breach of international law, people living in cities again became the direct target of attacks, as they had been during sieges in ancient times and the Middle Ages. The distinction between front line and rear, and between soldier and civilian, becomes blurred in these situations. This type of bombing killed a million civilians during the Second World War, for a military advantage that was uncertain at best.[10]

Since the 1930s, cities have seen all kinds of violence: the crushing of the Warsaw Ghetto Uprising as part of the Shoah, the bombing of Tokyo in the Second World War, the occupation of Gaza, and counter-insurgency efforts related to the war on terror in four battles in Fallujah since 2004 and now in Mosul. Berlin still shows evidence of bombing, street fighting and the division created by the wall, like a body bears the scars of its injuries. Kabul and Baghdad have been ravaged by war several times in the last few decades, and continue to suffer repeated attacks. Because cities are highly symbolic, they are also the preferred target of terror attacks, recent examples being New York, Mumbai, Paris and Nairobi.

7   See Hague Convention (IV), Articles 25–27. Article 25: "The attack or bombardment, by whatever means, of towns, villages, dwellings, or buildings which are undefended is prohibited." Article 26: "The officer in command of an attacking force must, before commencing a bombardment, except in cases of assault, do all in his power to warn the authorities." Article 27: "In sieges and bombardments all necessary steps must be taken to spare, as far as possible, buildings dedicated to religion, art, science, or charitable purposes, historic monuments, hospitals, and places where the sick and wounded are collected, provided they are not being used at the time for military purposes. It is the duty of the besieged to indicate the presence of such buildings or places by distinctive and visible signs, which shall be notified to the enemy beforehand."
8   Richard Overy, *The Bombing War, Europe 1939–1945*, Penguin Books, London, 2014, p. 609.
9   See the previous issue of the *Review* on "The Evolution of Warfare" (Vol. 97, No. 900, 2015), and particularly the interview with Richard Overy therein.
10   *Ibid.*, interview with Richard Overy.

In the last few months, several cities and districts have been besieged in Syria and Iraq in a way not seen since the war in the former Yugoslavia and the siege of Sarajevo (1993–96). By laying siege to a city, the attacker does not have to risk its troops in dangerous street fighting, and can let famine and exhaustion take their toll. According to the UN, almost a million people were living in besieged cities and districts in Syria at the end of 2016.[11] According to the president of the International Committee of the Red Cross (ICRC), Peter Maurer, Aleppo is experiencing "one of the most devastating urban conflicts in modern times".[12]

According to Michael Evans, "[i]n the decades ahead, it is a melancholy possibility that some cities in the developing world may become contested battlespaces – zones of conflict that will require the integration of the military art with the physical morphology and social geography of modern urban planning".[13] Several contemporary military thinkers, such as Evans in this issue of the *Review*, suggest we should brace ourselves for a fresh upsurge in military operations in urban areas.[14] In *Out of the Mountains: The Coming Age of the Urban Guerrilla*,[15] David Kilcullen concludes that counter-insurgency theories have not sufficiently taken account of current developments like the growth in the global population, urbanization, the rapid spread of technology with military applications such as drones, and advances in communications. He postulates that the conflicts of the future are likely to take place increasingly within the urban jungle of cities; armed forces would do well to prepare for the growing trend for armed groups to fight in cities.

Current events seem to bear this out: cities are again becoming the focal point of battles, partly because of a series of factors specific to modern conflicts. The vast majority of these conflicts involve armed groups fighting each other or government forces. Armed groups are sometimes born in cities, or they may hide in cities to benefit from the terrain: drawing the enemy into terrain that gives you an offensive or defensive advantage is a basic tactical ploy, and fighting in a city allows armed groups to make up for their relative weakness in these "asymmetric warfare" situations. In a sense, the city levels the playing field. The technological superiority of governments equipped with modern military hardware means that armed groups have no chance of success if a battle takes place in open country, so they hide in the urban fabric, blending in with the city's population.

Some armed forces may try to avoid street fighting, which causes devastation and is very costly in terms of both military losses and media and

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11 Stephen O'Brien, Under-Secretary General for Humanitarian Affairs and Emergency Relief Coordinator, Statement to the Security Council on Syria, New York, 21 November 2016, available at: https://docs.unocha. org/sites/dms/Documents/ERC_USG_Stephen_OBrien_Statement_on_Syria_to_SecCo21NOV2016CAD.pdf

12 See: www.icrc.org/en/document/syria-news-cities-aleppo-one-most-devastating-urban-conflicts.

13 Michael Evans, *City Without Joy: Urban Military Operations into the 21st Century*, Australian Defence College, Occasional Paper No. 2, Canberra, 2007, p. 2, available at: www.defence.gov.au/ADC/ publications/Occasional/PublcnsOccasional_310310_CitywithoutJoy.pdf.

14 See Michael Evans, "Future war in cities: Urbanization's challenge to strategic studies in the 21st century" in this edition of the *Review*. See also Stephen Graham, *Cities Under Siege: The New Military Urbanism*, Verso, London, 2011.

15 David Kilcullen, *Out of the Mountains: The Coming Age of the Urban Guerrilla*, C. Hurst & Co., London, 2013.

political fallout. Others may use a disproportionate amount of force in repressing armed groups and the population that is perceived as supporting them.

War in cities: The challenges

Although urbanization is a broadly positive phenomenon, due to the development of industries, services and cultural activities that it allows, at the same time the modern city is both particularly exposed to violence and a vehicle for violence, because of its density, anonymity, interdependent infrastructure and dependence on resources. In the future, as cities become more connected and dependent on new technologies, new vulnerabilities will arise, leading to fears of future cyber-attacks on public transports, the electricity grid or the banking system.

For people living in cities at war today, armed conflict has horrifying consequences. We have identified the following major challenges relating to the security of city-dwellers and the services they need to live and survive:

- Security: fighting, bombing, mines, improvised explosive devices (IEDs), unexploded ordnance and oppression by combatants mean that people's homes are no longer safe.
- Supplies of subsistence items: food and water are rationed, of poor quality or unavailable.
- Electricity and fuel supplies: these are limited, rationed or cut off.
- Health care: hospitals are damaged or destroyed, health-care staff become increasingly scarce, the quality of care falls, and there is a risk of epidemics spreading more easily.
- The future: people's ability to have an education, a job or any kind of future is compromised.

Where evacuation is possible, the sudden movement of thousands of people creates another major humanitarian challenge. For instance, it is estimated that 30,0000 people escaped Fallujah in a matter of three days, during the fierce fighting that took place in June 2016.[16] The cities of concern are not just those that become battlefields, but also those that take in people forced to flee violence. Today, it is estimated that 65 million people have been displaced by violence, and 75% of them are living in cities.[17]

The issues arising from the destruction of cities are particularly great, not just for their populations but also for the whole international community. Rebuilding a city is enormously expensive: in 2016, the World Bank reported that

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16 IRIN, "The Failure in Fallujah and How Lessons Must Be Learnt for Mosul", 28 June 2016, available at: www.irinnews.org/analysis/2016/06/28/failure-fallujah. See also IRIN, "Iraq: Escaping Fallujah", 29 June 2016, available at: www.icrc.org/en/document/iraq-cities-fallujah-displaced.

17 ICRC, Statement at the UN Conference on Housing and Sustainable Urban Development (Habitat III), Quito, Ecuador, 17–20 October 2016, available at: www.icrc.org/en/document/plenary-statement-icrc-habitat-iii-united-nations-conference-housing-and-urban-development also in the Reports and documents section of this edition of the *Review*.

rebuilding Yemen could cost $15 billion,[18] and rebuilding Syria more than $150 billion.[19] How much of this destruction could have been avoided if the fighters had complied more with IHL?

Aside from the physical destruction, there is other damage that cannot be repaired: the loss of human life, injuries, disease and the destruction of irreplaceable cultural heritage, both tangible and intangible. Not all of the consequences are immediately visible: urban conflict can also cause the division, dispersion or destruction of communities, psychological trauma, and a lack of education affecting one or more generations.

Sparing the civilian population

Recent conflicts have given rise to a series of serious violations of humanitarian law, particularly in cities: they include the use of chemical weapons, destruction of cultural property, sexual violence, indiscriminate shelling, deliberate targeting of civilian and medical infrastructure and terror attacks. Indiscriminate or direct attacks on civilians, captured fighters or fighters *hors de combat* are prohibited in all circumstances, in cities or anywhere else. In addition, given events in recent months, it is worth reiterating that the law forbids the use of starvation of the civilian population as a method of warfare,[20] and that attacks against people, vehicles or buildings involved in medical and humanitarian activities are prohibited.[21]

But prohibited acts aside, fighting in a densely populated area poses a number of difficulties for the mere application of humanitarian law, and particularly of rules governing the methods and means of warfare. Even assuming that IHL is perfectly respected, the cumulative effect of attacks over the course of a prolonged conflict can lead to severe humanitarian consequences. Nowhere is the inherent tension in humanitarian law between military imperatives and demands of humanity more apparent than in a city. It is in cities that military objectives, the civilian population and infrastructure are most closely entwined.

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18 Reported by Reuters, 17 August 2016, available at: www.reuters.com/article/us-yemen-security-damages-idUSKCN10R2B7.

19 Transcript of World Bank Group President Jim Yong Kim's opening press conference, 14 April 2016, available at: www.worldbank.org/en/news/speech/2016/04/14/transcript-world-bank-group-president-jim-yong-kim-opening-press-conference.

20 Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts, 8 June 1977, 1125 UNTS 3 (entered into force 7 December 1978), Art. 54(1); Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of Non-Internatioanl Armed Conflicts, 8 June 1977, 1125 UNTS 609 (entered into force 7 December 1978), Art. 14. See in particular Jean-Marie Henckaerts and Louise Doswald-Beck (eds), *Customary International Humanitarian Law*, Vol. 1: *Rules*, Cambridge University Press, Cambridge, 2005 (ICRC Customary Law Study), Rule 53; and for more information see Jean-Marie Henckaerts, "Study on Customary International Humanitarian Law: A Contribution to the Understanding and Respect for the Rule of Law in Armed Conflict", *International Review of the Red Cross*, Vol. 87, No. 857, 2005.

21 See ICRC Customary Law Study, above note 20, Rules 28–32; and J.-M. Henckaerts, above note 20.

One initial major concern is what happens to civilians within besieged cities or neighborhoods. To protect people from the effects of hostilities, humanitarian law provides for the evacuation of civilians. That remains a complex task in a city under siege, because it requires the agreement of both parties involved. One of the ICRC's main roles is to act as a neutral intermediary, and it has conducted these types of negotiations and operations many times.[22] The civilian population also has the right to relief. In recent years, there has been much debate about the lawfulness of cross-border relief operations following failures experienced by international organizations trying to provide humanitarian relief in Syria.[23] The *Review* has published a series of articles on the ability of humanitarian organizations to obtain safe passage and the State's consent to it.[24]

It could also be argued that greater compliance with humanitarian law in the conduct of hostilities on the ground, as well as measures designed to spare the city's infrastructure and civilian population as much as possible, would give people more chance of staying in their homes and would help to prevent the mass displacements we are seeing today. When entire populations are forced to flee violence, employing more customs officers at the borders of wealthy countries is not the answer. The solution lies in preventing or resolving conflicts. It also requires the parties to those conflicts to abide by humanitarian law.

The fate of displaced people and refugees is yet another argument for sparing the civilian population to become an international priority. Another major characteristic of recent conflicts is the involvement of external powers in support of one side. Abiding by IHL must be central to that relationship. Foreign allies must use their influence by making financial or military support conditional on local forces complying strictly with humanitarian law. This is the meaning of the obligation – set out in Article 1 common to the four universally ratified Geneva Conventions – "to respect and to ensure respect for" IHL.[25]

The use of explosive weapons in urban settings, particularly those that have a wide impact area, creates major challenges in terms of the basic principles of humanitarian law, namely the prohibition on indiscriminate and disproportionate attacks as well as the obligation to take precautions in attack. Although explosive weapons – like bombs, rockets and shells – are not prohibited as such under

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22 See, for example, ICRC, "Aleppo: 'Evacuation could take days- thousands of people in need'", 15 December 2016, available at: www.icrc.org/en/document/aleppo-evacuation-could-take-days-thousands-people-need.
23 See, for example, Pierre Kraehenbuhl, "There Are No 'Good' or 'Bad' Civilians in Syria – We Must Help All Who Need Aid", *The Guardian*, 3 March 2013, available at: www.theguardian.com/commentisfree/2013/mar/03/red-cross-aid-inside-syria.
24 See Rony Brauman, "Médecins Sans Frontières and the ICRC: Matters of Principle", *International Review of the Red Cross,* Vol. 94, No. 888, 2012; Emanuela-Chiara Gillard, "The Law Regulating Cross-Border Relief Operations", *International Review of the Red Cross*, Vol. 95, No. 890, 2013; Françoise Bouchet-Saulnier, "Consent to Humanitarian Access: An Obligation Triggered by Territorial Control, Not States' Rights", *International Review of the Red Cross*, Vol. 96, No. 893, 2014; "ICRC Q&A and Lexicon on Humanitarian Access", *International Review of the Red Cross*, Vol. 96, No. 893, 2014.
25 See Knut Dörmann and Jose Serralvo, "Common Article 1 to the Geneva Conventions and the Obligation to Prevent International Humanitarian Law Violations", *International Review of the Red Cross*, Vol. 96, No. 895/896, 2014.

humanitarian law, their use in urban settings creates a whole set of humanitarian problems. They kill and injure the city's inhabitants, destroy electricity infrastructure and disrupt networks of cables and pipes.

As well as their direct effects, explosive weapons can also give rise to a series of knock-on effects that accumulate and last for varying amounts of time, and are made worse by the complexity and interdependence of urban infrastructure – for example, the destruction of a transformer can shut down a whole hospital. The humanitarian consequences can be extremely serious, so the foreseeable knock-on effects must be taken into account when making a decision to attack and assessing whether the expected military advantage is proportional given the human cost.

In recent years, several organizations have started to assess the scale of this problem, and the *Review* has reflected this increasing awareness.[26] The UN secretary-general has expressed his concern about the matter several times in the *Protection of Civilians in Armed Conflict* annual report.[27] Working on the ground, the ICRC has witnessed first-hand the consequences of using explosive weapons in urban areas. It has carried out research[28] and organized expert meetings[29] to document their impact. Since 2009, it has made regular public statements on the matter.

The ICRC's position, adopted in similar terms by the whole International Red Cross and Red Crescent Movement, is clear: "due to the significant likelihood of indiscriminate effects and despite the absence of an express legal prohibition for specific types of weapons, the ICRC considers that explosive weapons with a wide impact area should be avoided in densely populated areas".[30]

This is a highly sensitive topic, because it potentially concerns all armed forces and the use of very common weapons. However, as the articles in this issue show, better compliance with humanitarian law is possible.

Firstly, technological advances in weapons, communications and intelligence gathering mean that the law can be applied more effectively. By making weapons more precise and focusing their blast effects, their impact is less indiscriminate.[31] To assess the proportionality of an attack in an urban setting,

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26 John Borrie and Maya Brehm, "Enhancing Civilian Protection from Use of Explosive Weapons in Populated Areas: Building a Policy and Research Agenda", *International Review of the Red Cross*, Vol. 93, No. 883, 2001.

27 See, for example, Report of the Secretary-General on the Protection of Civilians in Armed Conflict, UN Doc. S/2009/277, 29 May 2009, para. 36; Report of the Secretary-General on the Protection of Civilians in Armed Conflict, UN Doc. S/2010/579, 11 November 2011, para. 49; Report of the Secretary-General on the Protection of Civilians in Armed Conflict, UN Doc. S/2015/453, 18 June 2015, para. 30 ff.; Report of the Secretary-General on the Protection of Civilians in Armed Conflict, UN Doc. S/2016/447, 13 May 2016, para. 24 ff.

28 See, in particular, the report commissioned from Armament Research Services, available at: www.icrc.org/en/document/explosive-weapons-populated-areas-use-effects. The ICRC has dedicated a page on its website to the subject, available at: www.icrc.org/en/explosive-weapons-populated-areas.

29 In February 2015, the ICRC organized an expert meeting on explosive weapons in populated areas, the report of which is available at: www.icrc.org/en/publication/4244-explosive-weapons-populated-areas-expert-meeting. The 16th Bruges Colloquium on IHL in 2015 was on the subject of urban warfare; see: www.icrc.org/en/document/bruges-colloquim-experts-discuss-urban-warfare.

30 See, in this issue, the ICRC's Q&A on the use of explosive weapons in populated areas.

31 See, for example, Michael N. Schmitt, "Precision Attack and International Humanitarian Law", *International Review of the Red Cross*, Vol. 87, No. 859, 2005.

and particularly its indirect impact, military commanders now have access to much better intelligence, for example through the use of drones. When making decisions, they should be assisted by their legal advisers, but also by engineers or architects who can understand and predict the possible implications for the urban services that are vital to civilians.

Secondly, policy changes regarding stabilization and counter-insurgency operations are also intended to minimize civilian losses.[32] The expected military advantage of an attack can no longer be assessed separately from the political objective. Armed forces that fully understand their political and strategic interests may even go beyond the requirements of humanitarian law by adopting a still-higher standard of protection. When an attacking force decides to take greater risks in order to avoid civilian losses, or when a defending force takes the necessary precautions to protect civilians in the areas it controls, this must be acknowledged and welcomed.

Finally – as the *Review* never tires of reminding its readers – preventative measures in peacetime, such as instructing troops in humanitarian law and adopting orders, procedures and punishments that ensure compliance with the law, are crucial. They are also achievable by all responsible parties.

Total war, holistic response

Today, it is estimated that almost 50 million people are affected by conflict in urban areas.[33] This is a major challenge for humanitarian organizations. In Syria alone, between January and October 2016, the ICRC and the Syrian Arab Red Crescent provided drinking water to 15 million people and food to 8 million. Through their efforts, 1.1 million people were able to access health care.[34] According to Peter Maurer, urban warfare has altered the humanitarian space: "It's not by chance when we look at the 15 largest conflicts in the world, in which ICRC is active, the emblematic names that come to mind are Aleppo, Homs, Luhansk, Donetsk, Maiduguri, Aden."[35] Accordingly, the ICRC has recently dedicated pages on its website to cities in Iraq,[36] Syria[37] and South Sudan.[38] It also shared its experience of urban conflict with the international community at the Habitat III conference in Quito in October 2016.[39]

32   See the article by Sahr Muhammed Ally in this issue of the *Review*.
33   ICRC, *Urban Services during Protracted Armed Conflict: A Call for a Better Approach to Assisting Affected People*, Geneva, 2015, available at: www.icrc.org/eng/assets/files/publications/icrc-002-4249.pdf.
34   See: www.icrc.org/en/where-we-work/middle-east/syria.
35   Clár Ní Chonghaile, "Urban Warfare Has Altered the Nature of Humanitarian Work, Says Red Cross Chief", *The Guardian*, 13 November 2015, available at: www.theguardian.com/global-development/2015/nov/13/urban-warfare-humanitarian-work-international-committee-red-cross-peter-maurer-cities-conflict.
36   See: www.icrc.org/en/where-we-work/middle-east/iraq/iraqi-cities-baghdad-ramadi-fallujah-mosul.
37   See: www.icrc.org/en/syrian-cities.
38   See: www.icrc.org/en/where-we-work/africa/south-sudan/south-sudan-cities-renk-yei-wau-juba.
39   See: https://habitat3.org.

For humanitarian organizations, the first problem that arises involves gaining access to the people inside cities, to provide relief or help with evacuation. Humanitarian efforts are hampered by fighting and the fragmented nature of armed groups, as well as mines, IEDs and unexploded ordnance. As well as physical access issues, organizations also experience problems gaining acceptance for their humanitarian mission: they have to negotiate with the parties to the conflict, which often use water, food and electricity supplies as ways of putting pressure on their opponents.

The various urban services function together like the parts of a machine: they are highly interdependent, making them complex and also vulnerable, and the populace are more dependent on these services than their rural counterparts. Isolated measures are insufficient to repair or maintain urban services; they require a systemic response. Responding to urban crises is a difficult task, because an effective response requires a holistic approach encompassing a number of different methods and professional skills. That is why the first article in this issue of the *Review* is an interview with architect Eyal Weizman, founder of the Forensic Architecture research agency. His cutting-edge approach occupies a space where architecture, media and human rights intersect.

Whether the city is a theatre of war or a place of refuge, the lines between emergency intervention and development become blurred. In addition, many modern conflicts are protracted, and efforts to help residents must take into account the time factor. As we see over and over again in the news, residents and people involved in providing urban services who remain inside cities often show incredible tenacity, endurance and ability to withstand hardship, which humanitarians refer to as "resilience".[40] Recognizing this, humanitarian organizations are increasingly seeking to improve people's ability to survive and adapt, rather than merely providing the temporary relief that is sufficient for a short-lived crisis. At the Habitat III conference, the ICRC called for the "new urban agenda" to keep "cities working for their people in the terrible conditions of conflict, disaster and violence".[41]

In conclusion, given the protracted urban conflicts taking place today and likely to take place in the future, a new approach is necessary to maintain essential infrastructure and services, health-care provision and support for people deprived of

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40 Center for Civilians in Conflict, *Waiting for No One: Civilian Survival Strategies in Syria*, 7 April 2016, available at: http://civiliansinconflict.org/resources/pub/civilian-survival-strategies-in-syria; Patricia Justino, *Resilience in Protracted Crises: Exploring Coping Mechanisms and Resilience of Households, Communities and Local Institutions*, paper presented at the High-Level Expert Forum on Addressing Food Insecurity in Protracted Crises, Rome, 13–14 September 2012, available at: www.fao.org/fileadmin/templates/cfs_high_level_forum/documents/Resilience_in_protracted_crises_PJustino_01.pdf; Patricia Justino, *The Impact of Armed Civil Conflict on Household Welfare and Policy*, IDS Working Papers, Vol. 2011, No. 384, 2011, available at: https://www.ids.ac.uk/files/dmfile/Wp384.pdf; Oliver Kaplan, "Nudging Armed Groups: How Civilians Transmit Norms of Protection", *Stability: International Journal of Security and Development*, Vol. 2, No. 3, 2013, available at: www.stabilityjournal.org/articles/10.5334/sta.cw/.

41 See the ICRC's statement at Habitat III, available at: www.icrc.org/en/document/plenary-statement-icrc-habitat-iii-united-nations-conference-housing-and-urban-development, also in the "Reports and Documents" section of this issue of the *Review*.

their liberty. This approach requires several changes.[42] Humanitarian funding must evolve to allow organizations to keep fragile infrastructure up and running over the long term, rethinking the traditional distinction between development and emergency relief. Humanitarian and development organizations need help to enhance their technical expertise and operational capacity when responding to the complex requirements of urban systems. Finally, parties to a conflict must factor humanitarian law into their preparations for future wars in cities, and take into account the interconnected nature of a city's infrastructure when making tactical decisions.

Cities, where more people are living today than ever before, are likely to remain a focal point in conflicts. Indiscriminate bombing and siege warfare have resurfaced. The flight of residents from cities in Syria, Iraq and Afghanistan is creating an exodus of biblical proportions. With our experience, and given progress in the fields of law, technology and science, we have an urgent duty to act in order to ensure compliance with the law and prevent a return to the tragedies of the past. Urban war must not become total war.

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NB: Since 2014, certain topics covered in the *Review* have formed the subject of research and debate cycles at the Humanitarium, the ICRC's conference centre in Geneva, and around the world. The various events organized and contributions made as part of these cycles inform each other and become part of a global conversation by being published on the ICRC website and on the *Review*'s new *Humanitarian Law and Policy* blog, set up in 2016. Following on from cycles focusing on new technologies, the principles guiding humanitarian action and generating respect for the law, this issue of the *Review* will form the basis for a new cycle dealing with war in cities in 2017. That cycle will continue the debate between humanitarian organizations, academics, politicians and military leaders, in line with the *Review*'s multidisciplinary approach, in order to achieve greater respect for the law.

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42 See the ICRC's proposals in its *Urban Services during Protracted Armed Conflict* report, above note 33.

Announcement: Professor Andrew Thompson joins the Editorial Board of the *International Review of the Red Cross*

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The editorial team of the *Review* is pleased to announce that Professor Andrew Thompson has joined the journal's Editorial Board. Andrew Thompson is the Chief Executive of the UK Arts and Humanities Research Council and Professor of Modern History at the University of Exeter. He joined the University of Exeter in 2011, having previously held a Chair in Imperial and Global History at the University of Leeds where he was Dean of the Faculty of Arts and then Pro-Vice Chancellor for Research.

Professor Thompson is the general editor of the Manchester University Press *Studies in Imperialism* series, and is currently writing a book for Oxford University Press on the history of the international humanitarian system during and after decolonization. He recently joined the International Center for Humanitarian Affairs organised by the Kenya Red Cross and is the Chair of the Advisory Board of the Institute of Commonwealth Studies at the University of London.

VOICES AND PERSPECTIVES

Life in a war-torn city: Residents of Aleppo tell their stories

The road to the Al Jadaida neighborhood in Aleppo. 29 January 2017. Photo by Sana Tarabishi, © ICRC.

The Review *has chosen to open this issue with the voices of residents of Aleppo, Syria. Fighting in the city of Aleppo has stopped since the last opposition fighters were evacuated from the eastern areas of the city in December 2016 as part of a deal, but war continues in the rest of Syria, including in large parts of Aleppo governorate. This section is meant to frame the academic discussion to follow in light of the realities faced by those who live in cities at war.*

The stories below were told to the International Committee of the Red Cross (ICRC) in Aleppo on 6 and 8 February 2017. These people agreed to share their experience with the ICRC so that others may understand what their lives are like. Although

they have suffered much, they still have hope for the future. In order to protect them and their families, only their first names will be used.

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Yasser is 54 years old and lives in the Boustan Al-Qaser neighbourhood of Aleppo. He worked for the Syrian government until he retired, two years ago. He had five children, one girl and four boys, one of whom was killed in the conflict when their apartment building was bombed. He moved to Aleppo in 1985 and has lived there for thirty-five years. He has witnessed the conflict since its beginning in 2011.

As the war broke out, people took to the streets to protest against the government of Syria. Despite being threatened, I was not intimidated as most of those who threatened me were my students. Therefore, they always turned a blind eye to my attitude towards the situation.

I lived through difficult circumstances as I was left alone in the apartment building. I used to have to travel to the government-controlled area to collect my salary every sixty days.

Since the siege on east Aleppo started during Ramadan in 2016, the situation grew even more difficult as the people there were stranded for 190 days. We did not have access to the basic necessities of life; the situation there was in a state of paralysis. My youngest son was always hungry as there was nothing to eat or drink. However, today he is absolutely delighted by the fact that he can now eat bread and sweets. As we were short of water and electricity, we had to go to the farm [a small area of land inside Boustan Al-Qaser used for growing vegetables] to get two kilos of aubergine. We would stand in a queue for up to four hours. Eating aubergine dipped with sweet oil used to cost 10,000 Syrian pounds. Jam was clearly unaffordable for many people. As food items were extremely expensive, we were forced to eat different kinds of lentil-based food. As a result, I lost 25 kilos.

There was a dramatic turnaround of events as east Aleppo was taken back. I used to endure great pains to earn my salary as it took me thirteen hours to reach my destination, apart from the financial burden which this awful trip incurred. It is difficult to exaggerate the difficulties we had to run through in our lives.

I had a justifiable excuse for not leaving the neighbourhood. I used to have two apartments within the same building. Nothing seemed to disturb my peace of mind because business was thriving.

I never wanted to mix with parties engaged in the war. I was fully aware of the risks involved if armed people were to set foot in an area. The proximity of a military position to the place where we lived would put us at

> **"We were caught between the two conflicting sides. We seemed to have been stuck between a rock and a hard place as there was no way out."**

risk, since this area could become a target of attack. Indeed, disaster befell me when my building came under fire and was irreparably damaged. My son

suffocated and died in the attack. The first three floors of the building collapsed, leaving no chance for my son to survive.

We were caught between the two conflicting sides. We seemed to have been stuck between a rock and a hard place as there was no way out. I would not have wanted any human being to go through the kinds of hardships that we did.

In the aftermath of my son's death, my wife started to tremble with fear. We no longer had the chance to see our children. One of them has now been serving in the military for almost seven years. I was lucky that I was able to send my second son to Germany, hoping for a better future. Although it cost me an arm and a leg to finalize my son's travel, I have no regrets about this. As for my daughter, who had had two surgical operations before the crisis started, she sustained a tendon injury to her leg. Unfortunately, she has not had the chance to receive medical attention since the beginning of the war because of the security situation. My youngest son who had a problem with numerals made his way through education in a little mosque nearby. However, one day the mosque was heavily shelled and this shattered my son's hope for a better education. My neighbour of thirty-five years left the area permanently following intense fighting. Being the narrator, I just feel that my story tugs at everybody's heart. We suffered looting and plunder at different times.

I would never have wanted to leave east Aleppo had I not been warned. There were rumours circulating that the women of east Aleppo would be harassed. The idea of being under an imminent threat galvanized us into action. We embarked on a long journey across east Aleppo in an effort to reach government-controlled areas. We set off in the late afternoon and arrived at dawn. I was with fifteen family members and their children. The whole event felt like being on Judgement Day. There were thousands of people running for their lives.

Despite having been through extremely difficult circumstances, we always pin our hopes on a brighter and more promising future.

* * *

Hamed is 34 years old. He works as a technician in a water plant that is responsible for monitoring water pumps in case there is a sudden power cut. On 24 July 2012, armed groups took control of the area and the water plant, and the neighbourhood became part of the battle between the different sides. The water plant was cut off, and at one of the most difficult moments, members of an armed group attempted to loot the facility. During this time, Hamed and his colleagues worked to keep the water plant running and to ensure that water services could remain neutral.

I am a technician in the water plant, and father to three children. My work basically involves monitoring water pumps in case there is a sudden power cut.

24 July 2012 was a catastrophic event as armed groups stormed the water station and the area became a front line. All routes to the water station were cut off after the area of Bab Al-Neirah was declared a military zone.

Despite the dangers, my co-workers and I made our way back to the water facility to resume operations under the close supervision of the management board. Several rooms at the facility were destroyed following a series of deadly attacks (shelling, mortars and bombs) on the area. However, an underground room, which was our last resort, remained intact. In the event of intense fighting, we felt trapped there, sometimes for days on end.

We experienced several deadly events over the last few years. My co-workers and I maintained a continuous presence at the station. We were in direct contact with fighters all the time. During the crisis we worked week-long shifts in two water stations. During the crisis we had a weekly shift in two water stations – Suleiman Al-Halabi and Bab Al-Nairab. We used to cross the front lines on a weekly basis in coordination with humanitarian partners and parties on the ground.

> **Our goal was to keep the water facility working and to ensure the water supply remained neutral. We faced horrible moments; we felt like we were part of a horror movie.**

The crossing process did not always go smoothly; we faced challenges several times. Usually, workers' names were shared with all parties prior to the crossing, but many times some workers were rejected at a checkpoint without being given a reason.

We were trained to repair and maintain the water network in the area. I was injured during one of those high-risk missions. The targeted area was unique, because it was in the middle of three different areas of control: by the government, the armed groups, and the Kurds. Clashes started suddenly, and in the midst of this I was shot and transferred to Al-Haidareyeh hospital. My house is in an area that was controlled by the government. I hid the incident and never told my family. I was not able to use a cell phone, because any communication was considered highly sensitive.

Usually we spent our week-long shift inside the building, as going outside was forbidden.

One of the most difficult moments was when an armed group wanted to loot the electric cables from the station, as they were full of valuable copper. We stood in front of them; they forced everybody to lie down and ordered them to obey their commands. We refused at the beginning, but they threatened us with their weapons, and then took the cables and a generator.

Our goal was to keep the water facility working and to ensure the water supply remained neutral. We faced horrible moments; we felt like we were part of a horror movie. We were a vulnerable group of people.

We believe in Aleppo, in the people of Aleppo. Throughout history, the city has survived many crises and earthquakes, and has adapted to very hard situations. Aleppo has a hard-working population, a generous, kind, and forgiving population. Aleppo is not a city of sleep. It will rise again with the support of organizations and its people. Aleppo will thrive again, it will be rebuilt again.

* * *

Mohammed is a 48-year-old father of five children. He earns his living making furniture. He has witnessed Aleppo's transformation from a safe and peaceful city to a precarious place which suffers from extreme violence and experiences regular power and water cuts.

I am 48 years old and have five children, aged 22, 20, 16, 12 and 5 years old.

I earn my living by making furniture. Previously my business partner and I employed five workers and our revenue was excellent. However, because of the war all my good workers have fled – there are none left. We therefore spent the first two and a half years of the war without work.

> 66 We tried to support the displaced families, and one family stayed in my workshop for four months. They thought that the war would not last for more than a few months. But it lasted much longer. 99

Then, I realized that life has to go on; the war will not stop suddenly. We resumed our work but at a smaller scale, as we did not have any workers to rely on. We became older. Usually by this time the manager is able to rest more and the young workers take over some of the furniture-making work.

I still remember my boss from when I was younger. He would only deal with the customers, while we (as young workers) would do all the furniture-making. But these days I have to do everything myself, and by hand. My work has been impacted negatively – prices are ten times what they were, and there is a lot of pressure and a scarcity of essential materials. However, we have not raised our prices by ten times.

My shop is situated at the front line in the Al-Mashrqa neighbourhood. The area was targeted many times by shells, and many people lost loved ones. So far, I have only suffered material damages (thanks be to God).

Many people left the neighbourhood. I do not want to exaggerate the percentage, but I would say that easily at least 40% of people left. I never ever thought to leave. Anyone who knows Aleppo very well – its unique habits and traditions – will never think about leaving. However, I do not blame people who fled the city: they had no choice but to leave. Aleppo used to be a safe city; suddenly it turned from a peaceful place into a precarious one. We had everything, and in a moment, we had nothing. The cost of living went up gradually, until it reached the current level.

I believe in God, and I am not afraid of my fate. I cannot leave my city. Here I can keep my dignity. I have heard horrible stories about the situation of refugees. I am used to being a manager or to living by my own labour, working with my hands. I cannot be under the supervision of others.

We have adapted to the situation. There were many times when my wife asked me not to go to work, because of the shelling that day. However I have to go to work – I have children to feed. I believe that death will find me anyway, even if I stay at home. I have to go to work; I cannot stay at home.

The hardest thing I went through was when I received a call from my brother telling me that the house had been hit by a shell and that my young daughters had died. Everybody thought that the girls were dead. However, although they were severely injured, they managed to recover. They are in a good health at the moment. Following that incident, I developed diabetes, and my glucose needs to be controlled.

Dozens of people were displaced from eastern Aleppo. They had very terrible stories and fled from deadly shelling. Some people managed to set up their own businesses, but others had nothing and no money to live on. We tried to support the displaced families, and one family stayed in my workshop for four months. They thought that the war would not last for more than a few months. But it lasted much longer.

My 11-year-old girl and 5-year-old boy did not have a real childhood. Thanks be to God that they are safe, but they went through bad and terrifying experiences. My son suffers from panic attacks from time to time. He usually runs and hides whenever he hears loud noises – even if it is not the sound of battle, like when a door is slammed shut.

My wife is a strong woman, but lately she has become exhausted and has had a psychological burnout. She lost her temper recently and wanted to leave the country.

Even in these areas controlled by the government, we suffered from being besieged several times during the last few years. Many items were not available in markets; essential services were also not available. My children used to have to study by candlelight. Even these days Aleppo is suffering from general power cuts. The entire city depends on generators, which is not a real solution. People have to pay more and more to cover their basic needs, and this is becoming more and more difficult for people with low incomes.

Water is an essential issue. We used to suffer from water cuts, so people had to rely on water trucking, which is an additional cost. Fuel is another issue. I had never felt cold in my life, but these past few years, feeling cold in winter became a normal part of life due to persistent fuel shortages.

Because my workshop is close to the front line, I witnessed the shelling many, many times. When the shelling started, everybody would run for shelter. Experience had shown that other shells would soon hit the area. After about ten or fifteen minutes, we would rush to the shelled area to help the injured people. Fighters in the area usually also gave help to the injured, and we got used to the sound of different weapons. We can recognize which weapon is being used from its sound.

Despite all that has happened, Aleppo is one city and Syria is one country. Community solidarity is the key issue; I believe the crisis is a dark cloud and the sun will rise soon.

Interview with Eyal Weizman

Professor at Goldsmiths, University of London, Director of the Centre for Research Architecture and Director of Forensic Architecture*

Contemporary warfare is increasingly waged in urban settings and is often characterized by asymmetry between the parties. This trend is only likely to continue in light of a more and more urbanized world. It is compounded by the fact that belligerents often avoid facing their enemies in the open, intermingling instead with the civilian population, putting civilian lives and infrastructure at risk.

Eyal Weizman is an architect and academic who has spent much of his career writing and thinking about the interaction of violence and the built environment. He has worked extensively on the ways in which war is fought in built-up areas and on how architecture can design an environment that is either more or less conducive to urban warfare. Most recently, he has been developing the new field of forensic architecture, which aims to research incidents that unfold in urban areas, examine the architectural aspects involved and draw patterns from those stories. In this interview, Professor Weizman shares some of his reflections on war in cities with the Review.

Keywords: urban warfare, forensic architecture, the built environment, cities.

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Tell us about your background. How did you come to work on the interaction of violence with architecture and the built environment?

I studied architecture in London at the Architectural Association School of Architecture, which is known worldwide to be an avant-garde, conceptual school, one that deals with the "source code" of architecture. At that time I was already gravitating towards working on social and political issues. In the middle of our studies, students were supposed to take a year off. During that year – it was soon after Prime Minister Yitzhak Rabin was assassinated – I went back to Israel and volunteered with the Palestinian Ministry of Planning, near Ramallah. There, I realized that the Ministry was working with very outdated maps: although the Oslo Accords had been agreed and the Oslo process was under way, the Palestinians had not been provided with up-to-date cartographic information. After realizing this, I started operating like a small-scale industrial spy: I went into geography and architecture libraries, made photocopies of maps and brought them back to the office. I understood the importance of space and spatial representation in political issues. The lack of up-to-date maps was a political problem.

When I finished my studies, B'Tselem, a human rights group in Jerusalem, asked me to participate in drafting a report on human rights violations through the settlement project.[1] In the early 2000s, there were about 120 settlements. At that time, the plans of settlements were simply dots on the map. Relying solely on the legal principle laid out in Article 49 of the Fourth Geneva Convention – providing that an occupying State is not allowed to transfer its own population to an occupied area – to object to the settlement project, a dot beyond the border line is already a violation of the rule. However, we thought that there was something missing in relying only on this principle, from a human rights perspective. Therefore we looked not only at the location of settlements, but also at the form that the settlements were taking.

As architects we could make a professional judgement, saying to ourselves: "If I were to design a settlement without a political objective, it would look more or less like this – circular in one case, longitudinal in another. But in reality, the settlements look like long and thin wedges. Why is that?" We realized that these wedges were cutting out the West Bank. In Jerusalem, the Jewish neighbourhoods were designed not only to serve their own inhabitants, but also to disrupt the possibility of Palestinians living in and controlling their own space or engaging in trade. By their shape, the Jewish neighbourhoods were dissecting Palestinians from each other. We described this as "architectural violence" – violence that takes place on architects' drawing boards. This report was one of the first to tie architectural issues to violations of human rights, and that was the seed of forensic architecture as a concept or a field.

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1   B'Tselem, *Land Grab: Israel's Settlement Policy in the West Bank*, report, May 2002, available at: www. btselem.org/publications/summaries/200205_land_grab (all internet references were accessed in December 2016).

Violence operates according to various scales in terms of duration and speed. For instance, there is the slow violence of the settlement project, the slow encroachment of the land – transforming it, draining its water – which is lethal and destructive, but happens over years, if not generations. That slow violence sometimes converts into kinetic violence. The settlement projects require their own security: to have a settlement, you must be guarding it. You also need to patrol it – you need to raid the next town to discourage its population from resistance. This results in kinetic incidents like shootings, arrests, destruction of homes, *et cetera*.

We understood that architecture stands between that slow violence of planning and design, and the fast, kinetic violence. These days, fast, kinetic violence mainly takes place in built-up environments. Built-up environments are complex, not only because the physicality is rather complex – there are many streets and alleys, buildings of various forms – but also because they are the environments of civilians, different groups and, increasingly, the media. Everyone is a media reporter of sorts, recording and uploading content online. It is important to understand that type of violence – kinetic violence that happens in a built-up environment – architecturally. This is how the proposition of forensic architecture emerged, as existing on the spectrum between slow violence and fast violence.

What is the concept of "forensic architecture", after which you named your research agency, and how did it lead to your reflection on violations of human rights and humanitarian law?

Forensic Architecture, the research agency,[2] emerged after years of theoretical and historical work mainly on Israel and Palestine, urban warfare, and the relationship between architecture and violence. Forensic Architecture provides such organizations such as the ICRC, international prosecutors, the United Nations, Amnesty International, smaller political groups, and human rights groups with architectural evidence. We aim to make people aware that architecture is a framework with which we can study all sorts of contemporary processes. It is a framework that is absolutely essential because if war takes place in an urban area, traces of this violence are left on buildings. On the one hand, to understand what happened, you need to be able to read a building as a pathologist reads a dead body.

On the other hand, forensic architecture is a concept that also exists on a spectrum between fast violence and slow violence, between the violence exercised on the drawing board and the consequential violence that takes place in the city in buildings, and examines how all of this relates and converges together. Here is another way to look at it: increasingly, in terms of forensics, different bits of

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2   Editor's note: Forensic Architecture is a research agency based at Goldsmiths, University of London. You can learn more about the Forensic Architecture project on its website, available at: www.forensic-architecture.org.

evidence – medical, testimonial or video evidence, munitions – are scattered throughout an urban environment. Rarely does any one piece of evidence operate in isolation. What you need to create is an assemblage of evidence. These are intersections: time–space relationships between the individual pieces of evidence. These are best viewed in three-dimensional models. A lot of what we do is synthesizing huge amounts of pieces of evidence. You can think easily about the relation between three pieces of evidence – the relationship between eyewitness testimony, a gun and a bullet hole in a wall, for instance. But we are often synthesizing thousands and thousands of separate pieces of evidence within space and time in digital 3D models. The 3D model of the architectural environment becomes an optical device to understand the relationship between those separate elements.

Architecture is also important because it bridges the otherwise very firm divide between classes of evidence: witness evidence, material evidence and spatial evidence. Architecture as we use it, both in the Saydnaya project[3] – where we reconstructed the architecture of a Syrian prison from the memory of several of its survivors – and in previous projects, is a conduit into memory. It is a way in which to induce recollection and to make it apparent. In interviews within a simulated virtual environment, we can access witness memories that would not otherwise be available.

These are the three main ways in which we see the centrality of architecture emerging, and you can see it against the backdrop of the growing importance of forensics in the field of human rights and international humanitarian law. As new classes of evidence emerge, material evidence becomes very important. This is what we call the "forensic turn". One of the starting points of the forensic turn is the work of the Argentine Forensic Anthropology Team in relation to the Argentine disappeared, where mass graves stopped being simply sites of national or religious ceremony and became an epistemological matrix from which to understand conflicts. There was a lot of information in those bones and decomposed bodies. Such work was very important in shifting human rights work towards material evidence. We have been relying on that forensic turn and claiming the centrality not of osteo-biographies, but of media and architectural ones.

Can you give us some examples of your current work?

Let me demonstrate the forensic turn as it impacts on different scales of violence, from the small to the bigger scale. On a smaller scale, there was a shooting incident in the West Bank, in Beitunia, on Al-Nakhba Day 2014 [15 May 2014]. A surveillance camera recorded two young teenagers walking along a stretch of a road and being shot. On the CCTV recording, it is clear that they were not involved in anything at the time of the shooting. Later, another video emerged on

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3 See Amnesty International and Forensic Architecture, *Saydnaya: Inside a Syrian Torture Prison*, available at: https://saydnaya.amnesty.org/.

CNN, in which the soldiers were seen shooting. The problem is to tell the story that exists within these two recordings. Because these events happened in space, we needed to synchronize the videos and locate them in the model in relation to each other. We synchronized all of the evidence, in order to show who shot the teenagers. More importantly, we used a 3D model to locate the video perspectives in space. This is what we call the "architectural image complex": locating where the point of view of the video exists in space. It is very hard, otherwise, to understand the time–space relation between the videos. We undertook this work for the parents of the teenagers who were killed and for an organization called Defense for Children International.[4]

Compare this to the sort of material that comes out of the US right now – on US police brutality against black bodies – where a lot of the evidence that comes out has the perpetrator and the victim captured in a single frame. That is a good piece of footage, and it could become viral because it tells a story. But most often, in urban warfare, for every piece of footage where you have the perpetrator and the victim in a single frame, you have dozens, if not hundreds, of videos in which you have either one or the other, or some bits before or after, or just the sound, or just an element of the story. With that type of information, you need to synthesize and compose, and architecture is the best medium to do that composition.

We discussed the smaller scale of violence against the human body, now let's discuss the next scale: the room. We worked on a project for the UN Special Rapporteur for Human Rights and Counterterrorism, Ben Emmerson. He has reported on drone warfare in Pakistan, Afghanistan, Somalia, Yemen and Gaza. The problem was that everyone involved in drone warfare realized that at some point, the pattern of drone warfare shifted, from drone strikes on roads and remote places, to the cities and the villages around them. The drone violence became urban. Together with the drone violence becoming urban, a special kind of missile was developed, the Hellfire II "Romeo", which was able to penetrate layers of walls and floors in order to reach a certain designated room.

The problem with the ammunition employed in the first generation of drone strikes was that it used a hollow charge, which was developed to be shot at tanks. It was good enough, as long as cars or military camps were being targeted. But when you hit a building, the hollow charge would not be strong enough to destroy it. It would detonate on impact, on the roof, and the jet stream of melted steel would not reach deep enough into the building.

So there was a need for a new class of ammunition with a delayed fuse, which would enter through the layers of floors and ceiling, and reach a designated room before impact and detonation. The Hellfire II "Romeo" can blow up in a room one or two floors under the place of impact. The apologists of this technology referred to it as "humanitarian" because it supposedly reduced collateral damage. In reality, it reduced it compared to the kind of bomb they

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4   See Forensic Architecture, *Nakba Day Killings*, available at: www.forensic-architecture.org/case/nakba-day-killngs/.

would otherwise use, the quarter-ton bomb, which, in order to kill a targeted person located in a building, had to destroy the entire building and kill everybody in it. So it reduced collateral damage, but it also allowed the proliferation of the use of drones. The fact that it was a lesser evil allowed it to be more frequently applied. The use of that class of munition went hand in hand with the proliferation of drone strikes on cities. Perhaps if they would not have had that tool, less of these strikes would have been authorized by the US legal adviser.

We did a pattern analysis and developed software to look at patterns in time and space. We took all the information on drone strikes from the Bureau of Investigative Journalism, which catalogued each one of the drone strikes from various local news channels and from people on the ground – they had a file of a few hundred drone strikes in Pakistan. Nobody studied the kind of targets that were hit, so we went back to all the articles and started classifying the strikes according to architectural damage. What was targeted? Was it a civilian home, a market building, a public building, a mosque, an open street, an open area, a car? We also looked at the level of damage and created a database with the information.

We started looking at patterns and relations between the information gathered, and we noticed an increase in strikes on cities. The pattern of US drone strikes had to change because the Taliban understood the signature strike: if you drive along this road, at this time of night after calling this mosque or being there, boom. The Taliban moved into the city, stopped driving, started walking, bicycling or motorbiking, or driving animals between buildings. So the US practice changed the pattern of behaviour on the ground. There was a co-evolution going on, pattern recognition from both sides.

There was a certain kind of evidence that came out with this change of pattern in drone strikes that was very distinct. What happens with a delayed-fuse munition that does not bring the building down? It always leaves a hole in the ceiling. We needed to look for holes in the ceiling in order to evidence the increase of drone strikes in cities – that was the architectural cracks of our work. How to connect an architectural detail, a hole in the ceiling, to a policy, and to the increased civilian casualties? The problem was that the hole in the ceiling was about 30 centimetres in size, but the size of a pixel of a satellite image is 50 centimetres: the holes in the ceiling were simply drowned within a single pixel. In order to collect evidence, we used all sorts of video material that was smuggled out of Pakistan at the time, and we had to develop a way to analyze those handheld videos.[5]

Now, let's move up a scale to the level of a city. We were asked by Amnesty International to provide a reconstruction of a period of twenty-four hours during the Gaza War on 1 August 2014. On that day, the capture of an Israeli soldier by Hamas had led to the triggering of the Hannibal Directive. The Hannibal Directive was a secret command that allows soldiers to risk the life of the captured in order to stop the capturing, but is in fact understood by soldiers to

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5   See Forensic Architecture, *Drone Strikes: Investigating Covert Operations through Spatial Media*, available at: http://wherethedronesstrike.com and http://www.forensic-architecture.org/case/drone-strikes/.

mean that they are allowed to – or required to – kill their comrade to prevent him from becoming a prisoner.[6] Neither Amnesty International nor its reporters were allowed in Gaza, either during or after the war. We had to rely on this new type of testimony that emerged, particularly in urban areas: participant testimony.

First, we had testimonies coming from soldiers, with the help of an organization called Breaking the Silence, which collects Israeli soldiers' testimony. Soldiers are themselves increasingly taking photographs and video, using GoPro cameras, for instance. Soldiers were now documenting their own violations of humanitarian norms or those of their comrades: that is a kind of participant testimony. It is a very different class of evidence than regular testimony, which comes after the fact, as such participant testimony is taken during the acts. There were also testimonies coming from the Palestinians in Rafah.

What was unique about that war was that in April of the following year, Palestine ratified the Rome Statue after long-standing pressure on the Abbas government by Palestinian civil society. So at the time of the war, there was a growing consensus on the subject of joining the International Criminal Court [ICC] between all Palestinian groups, including Hamas, Islamic Jihad and of course Fatah, knowing that it would also expose them to counter-cases over which, potentially, the ICC could have jurisdiction. These developments, together with the simple, very human understanding that when something happens around you, you want, at least, to record it, led to many people risking their lives taking photographs and videos.

At Forensic Architecture, we had thousands of videos and images and we needed to reconstruct a period of twenty-four hours during the war by building a set of relations between those images. One image would show tanks going in, another one would show a building being hit, another one would show a mushroom cloud going over someplace, and another one would show civilians walking with red flags. What is the relation between these events? Sometimes, increasing the amount of images in war does not add clarity but rather creates confusion. There is an incredible amount of images that you cannot make sense of, unless you have the trophy shot of the perpetrator and the victim in the same frame. But this time we did not have that. Instead, we had distributed events and what we needed to do was to stitch them all together through a model. This resulted in us building a model of the entire city of Rafah, in which we located each one of these sources in time and space in order to tell the narrative. This is on the level of the city.[7]

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6   For more information on this incident, see Jason Burke, Julian Borger and Paul Lewis, "Israel Bombards Rafah after Soldier Disappears amid Gaza Ceasefire Collapse", *The Guardian*, 1 August 2014, available at: www.theguardian.com/world/2014/aug/01/israel-bombards-rafah-soldier-disappears-gaza-ceasefire-collapse. For more information on the Hannibal Directive, see Judah Ari Gross, "Israeli Army Cancels Controversial Hannibal Protocol", *The Times of Israel*, 28 June 2016, available at: www.timesofisrael.com/idf-chief-puts-an-end-to-contentious-hannibal-protocol/.

7   See Forensic Architecture, *Rafah: Black Friday*, available at: www.forensic-architecture.org/case/rafah-black-friday/.

In regard to the bigger scale, Forensic Architecture is interested in what we call environmental violence – in other words, slow violence affecting the environment. Deforestation is a good example of that. In Guatemala, we were involved in research related to Rios Montt's years in power. Our information showed that the deforestation of the Ixil-Maya area in the Quiché part of Guatemala was part of the strategy of the military to control the area and in fact part of the genocide, of which Rios Montt was convicted – though he spent one night in prison and then was under house arrest before the conviction was overturned. All of this – the deforestation, the destruction of Ixil villages and the reconstruction of what were called model or concentration villages placed under the control of the regime – needed to be understood spatially.[8]

Now, we increasingly work on the relationship between climate change and violence along what we call the "conflict shoreline" – that is, the aridity line, the line of desert that crosses the earth. The movement of the aridity line – it is moving as climate change gradually shifts the threshold of the desert – ignites or aggravates a series of conflicts along the way. One of the aridity lines – beyond which there is less then 200 mm of rain per year, which scientists define as a desert – starts in North Africa, in Morocco and Algeria, at the northern threshold of the Sahara; it goes through Libya, Egypt, through the northern Negev, where the Bedouins are displaced by the Israeli government, into the West Bank. From the West Bank, it goes into Jordan, then into Syria, Daraa, where the protest that led to the Syrian civil war began. It goes through all the major cities of conflict, including Al-Raqqah, the capital of the Islamic State, and then it goes to Iraq, Iran, the Pakistan frontier, and Afghanistan.

Architects are also doing work on that much larger environmental scale. When somebody is shot or decapitated with a knife, that is an immediate, eruptive type of violence that is sometimes caused by that slow transformation on the environmental level. And we need to see those two as related. These were usually held by different optics, dealt with by different institutions – for instance, Greenpeace would do climate change, and Amnesty International would do the conflict-related work – but now we know they are related. We need to develop a framework that looks across these institutions.

According to the observations you have made in the course of your research, is there more fighting in cities today than in the past?

In armed conflicts right now, almost all of the fighting takes place in cities. The asymmetries in warfare are such that if an armed group tries to resist a Western military – or at least a modern military with an air force – from outside of a city, it will be easily targeted. Daesh could survive for a while along the arteries of the desert, but only because of either the reluctance or the inability of the Syrian

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8   See Forensic Architecture, *Guatemala: Operacion Sofia*, available at: www.forensic-architecture.org/case/guatemala-operacion-sofia/.

military to attack them. When armed groups start being attacked systematically from the air, they have to retreat into cities.

This is not a new facet of war; it has always been a feature of asymmetrical warfare. Defensive position in density means that the environment could either be the jungle, such as where Central American resistance movements evolved, or the city. The city is a kind of urban, concrete jungle. An urban environment can level some of the intrinsic asymmetries of non-international armed conflict, because it is much easier for defending groups, which know the city (or the forest), to move through and disappear, to blend in with the population, and so on. This also accounts for the relationship between deforestation as a military tactic – using herbicides in such conflicts as Vietnam in the 1960s and 1970s, Guatemala in the 1980s and Colombia very recently – and urban destruction in such places as Grozny in the 1990s, Jenin in the early 2000s, Gaza in 2008–09, 2012 and 2014, and Sur in Diyarbakir, eastern Turkey, more recently.

How do the different actors involved in armed conflicts – States, armed groups, civilians – use the built environment?

There is a growing body of work by military and security think tanks on urban warfare, which has been developed since the 1990s because of a new set of urban challenges that emerged. The realm of hostilities is no longer either ballistic nuclear warfare or tank-to-tank warfare, and counter-insurgency occurs less in equatorial forests, but instead in urban areas. When this shift happened, militaries were not prepared for it, neither conceptually nor in terms of equipment and hardware. From individual guns and surveillance to the vehicles that they were using, the equipment was meant to serve tank warfare. As a result, the military started thinking about cities quite seriously. Much thinking was done in the US and Israel – the latter being the area on which I conducted my research. Urban and architectural thinking – the academic discipline of urban studies was quite critical and certainly left-wing – were adopted by the military.

What happens when you feel left out of a discourse? You devour it, right? You go into a "hoover" approach to the literature. This is what the military did with the urban literature that was developing in academia over the past thirty years. There was a lot of thinking about cities because really, a process of urbanization accelerated with the globalization of the post-World War II era. Globalization developed sets of relations between cities, including those from the East and South, so the writing on cities mostly came from postcolonial and urban studies, and it emerged because scholars – many of them from either a neo-Marxist left-wing perspective, postcolonial perspective or postmodern perspective – were interested in cities as sites of hybridity – complex sites of both social and economic production.

When the military realized that it did not produce its own thinking on that subject, it acquired a bookshelf that would not shame any left-wing scholar. This was a very paradoxical situation, where the head of the Operational Theory Research

Institute – a security military think tank ran by a doctor in military studies called Shimon Naveh – was teaching his students Deleuze and Guattari – French philosophers of the French left – Foucault, postcolonial thinkers such as Gayatri Spivak, and even artist groups like the Situationist International. Those theories presented a guidebook to urban complexity. The problem of cities is complex: the city is not just a pile of buildings. Everything that happens in the city becomes operationally and politically complex, particularly in media-heavy environments in which civilians and combatants are intertwined. This development led to all sorts of complex systems, co-evolution and co-learning which were more or less successful in military terms at that time.

From a resistance perspective, people normally want to retreat into the area where it is hardest to be found, where they have support and where they can disappear easily. It is only natural that the resistance would move into the densest parts of cities and refugee camps. Simultaneously, militaries in what Derek Gregory called the "colonial present"[9] – the sort of occupations seen in Afghanistan, in Iraq or in Palestine – understood that the city was to be thought of as a site of heterogeneity: not only as an area in which conflict takes place, but also as the condition that bred conflict. Another example of what this could mean is that for strategists, the refugee camp was not only a site of conflict; the refugee camp was a condition that bred conflict. To break the refugee camp, it would have to be re-planned from a dense area where the sewage runs on the streets, into systematic housing blocks that could be controlled, supposedly, more easily.

A bit like Paris, after the nineteenth-century revolutions…

Of course. The Haussmannization of Paris had many economic and class dynamics at play, but it also had a strategic rationale – controlling the arteries of movement through the city – simply because the resistance to monarchy, and later to the Second Empire, sought to develop autonomous zones by blocking off traffic. In the dense workers' neighbourhood, this blocking of movement was undertaken by installing the famous barricades. To control a city is to control the means of circulation through a city. To be able to move through it, to be able to get to everywhere you want to go, you need to keep the arteries open, or to make new arteries, by either planning or destruction or the interaction of both. Making wide arteries is always good for militaries that want to control an environment. This was true in nineteenth-century Paris, as it is true in the Balata refugee camp next to Nablus, as it is true in the Palestinian refugee camp in Lebanon.

The military always seeks to resolve political problems through urban/architectural means. A good example of this is the destruction of refugee camps by Israel in the 1970s. Ariel Sharon, who oversaw this campaign, was one of the biggest builders of social housing projects in North Gaza, for example in Beit

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9 See Derek Gregory, *The Colonial Present*, Blackwell Publishing, Malden, MA, 2004.

Lahia. The blueprint for the architecture of these social housing projects was simply taken from development towns in Israel and transported into Gaza. The point was to take the refugees out of the camps because, supposedly, they would then not be refugees any more. Identity, Sharon and the Israel Defense Forces thought at the time, was tied to the particular environment of the camp. Another idea was that the refugees would not resist if they had something to lose. This is an age-old idea. Do you remember Levittown, in the United States? It was a suburb, built and run under the idea that anyone who owns their house would not be a communist. Architecture is a good way of creating a thing that can be taken away. This is one of the multiple ways in which architecture and war interact with each other.

You have previously described the tactics used by the Israeli military as "very architectural". Can you elaborate on this?

Fighting in the city, from both the resistance and the military perspective, requires shaping the city. Sometimes this is done on a micro level – by building trap doors, secret stairwells and halls – and sometimes it is done with bulldozers. It is an analogy that needs to be understood. The bulldozers that went through the Jenin refugee camp in 2004 are a good example of this. If you look at the Jenin camp, one way to understand this type of warfare is to say: "This many hundreds of houses were destroyed; it is this percentage of the city." That is not an architect's perspective. An architect would look at which houses were destroyed, and the relationship between them – what does the destruction add up to? And then a kind of logic emerged: a kind of Hausmannization of the Jenin camp. The bulldozer followed a logic in what it destroyed. It opened up the city; it redesigned the city so that it could be controlled.

In fact, when Jenin was rebuilt, partly through a donation from a Red Crescent Society, the roads were rebuilt differently; the roads were made slightly wider to allow the tanks in, because they did not want to see more destruction. The resistance in the camp was unhappy with that, because it meant opening the camp to military control. That is not the role of humanitarians, to make it easier for a tank to move through – and the width of a tank is not the standard benchmark for the width of a street.

Cities and buildings are also instruments of movement, for vehicles and human bodies. What was done in Jenin on the level of vehicles was done in Nablus and Balata on the level of the individual soldier. An example of this is holes in walls left by soldiers' movements through buildings. Imagine you are sitting here, having a meal, and the wall next to you is suddenly destroyed and soldiers come in. But they are not after you, and soon they disappear through the next wall behind you. To plan this kind of operation, you need to have a three-dimensional conception of the city. Urban warfare does not only happen on the surface plane. It happens above and below – it is volumetric. Sometimes the resistance is at one place, and soldiers are located above and below it. Then,

forces move like a worm in an apple. Rather than existing on a surface, a worm in an apple navigates through 3D models and in all directions. In this way, soldiers need to be thinking like architects, and architects are sometimes commissioned to think like soldiers. Architects might sometimes design a neighbourhood to promote control, and sometimes to aid resistance.

In the past, war-fighting tactics have sometimes been aimed at the total destruction of cities. Today fighting in urban areas seems to take into account the fact that forces need to fight within the city without simply wiping it out, taking into account the urban population. How do you see that in terms of international humanitarian law?

When Hamburg, Dresden and Hiroshima were bombed in World War II, it was through a binary conception of warfare. It was total war. The civilian population was seen [illegally] as part of the war effort, either through industry or through any other form of support for the fighting force. In Japan or Germany, there were no opposition groups that could be supported to create fissures within a political fabric. The understanding was, if you are behind that line, if you are in Germany, then you are part of the war effort. Therefore wiping out cities was, to a certain extent, a product of the conception of war as a binary situation. The city was always a city of perpetrators and therefore, to a certain extent, responsible for what was happening in the Pacific, on the Eastern Front or on the Western Front in Europe. This is of course illegal. It is against international law to attack civilian parts of a city even if this is your conception.

Today many attacks on urban areas are part of a political calculation. Cities can be understood as environments that are already saturated by conflict, between contradictory linguistic, ethnic or political groups of various sorts. Therefore, in urban warfare violence is often applied within a field that is already saturated with internal social and political conflicts. It somehow seeks to open fissures, or intervene within existing conflicts. The military sometimes calls it "injecting kinetic energy into social relations". A common perception is that within urban warfare, the civilian population is an obstacle in the way of the military. This, however, is not true – urban warfare is about civilians. Civilians are a crucial part of the equation: hurting them or protecting them is part of the strategy. Urban warfare is political in the sense of wanting to influence, to win over the civilian population, to govern them in order to influence their inclinations, to gain their support. Sometimes militaries want to deter – that is, to scare or terrorize civilians into submission, into doing what they want. At other times militaries seek to protect or help civilians so that they do what they want. In this context, allowing medical and other humanitarian aid to reach the civilian population is part of the strategy. So there is a problem with the determination of the killing of civilians as "collateral damage". Urban war is about civilians, and their fate is part of the aim of the war. Civilians are what this form of war is about.

How would you describe the consequences of modern urban warfare for humanitarian actors?

As a humanitarian actor, you need to know that when you operate in a situation of urban warfare, you are also at risk of becoming a tool. It was made very clear recently, in relation to cities like Aleppo, that humanitarian aid, when controlled by those in power, could become a political and military tool, used to support only the friendly population or as part of a policy of carrots and sticks. Another tactic of urban warfare is to aggravate a humanitarian crisis in a kind of reinstatement of classic siege tactics that tries to control people, or to compel them to surrender by cutting their supplies. Today, however, it is a bit more complex. Supply cannot be completely cut off because of the media, so parties to conflict need to show that supplies would be allowed under particular terms. Contemporary siege warfare is more complex than traditional siege warfare, as it has media and humanitarian aid in the equation.

What role can and should architects and urban planners play in humanitarian action?

I think we need to understand the issue of humanitarian assistance as a proper urban issue. The problem of cities has always been a problem of circulation of goods, of nutrition – of grain, mainly – and from a certain period in early modernity, of medical services. The history of the city emerges as a problem of grain circulation – you can read Foucault on governmentality on that subject.[10] The same goes for public health. Public health is the foundation of urban planning. Humanitarian action is a properly urban type of action, and humanitarians need to start thinking about their practice urbanistically and architecturally. We need to understand humanitarian actions not simply as being based on a statistical problem of numbers of human bodies in space, mouths to be fed and wounds to be healed. The location of a hospital or a distribution centre for food or other forms of aid has an urban dimension. These places affect, sometimes interfere with and manipulate spatial hierarchies; they have an effect on how the city operates or the relations between cities, camps and villages. Thinking of distribution locations and flow is something that could be done together with architects and urbanists.

Architecture is both a framework in which to analyze and interrogate situations, and a means of intervention. Architectural intervention is not always only about bricks and mortar or the selection of a site to build a building on. For example, if you take a school and you turn it into an emergency medical centre, this is an architectural act that affects the way the neighbourhood operates in the long term. We need to think about what kind of effects it creates. What kind of

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10 Michel Foucault, *Security, Territory, Population: Lectures at the Collège de France, 1977–1978*, Picador/Palgrave Macmillan, New York, 2009, p. 33 ff.

vulnerability and potential side effects emerge as a result? How does it affect the city, or town, or relations across a periphery? What is its effect on circulation and flow within the city? Therefore, architecture should be part of that thinking.

We have talked about how damage to a city can be read like wounds on a dead body. You seem to be introducing a new idea that there is also a predictability of urban warfare. Could this work be used to prevent conflicts?

I would be very careful with prediction or determination. For example, along the aridity line, you can say that there is increased vulnerability, that some tensions and existing conflict could be aggravated, but in theory, some societies could deal with those changes and they could be absorbed. We have not seen in Morocco the same level of transformation we have seen in Tunisia and Libya, although the effect of climate change has been similar. We are using, with caution, some of the principles of predictive forensics. What is predictive forensics? Well, forensics is usually something that is directed towards the past – the main question is, "What happened here?" – but increasingly, it is moving towards looking to the future.

Predictive forensics is the futurology of contemporary warfare. It studies the future mathematically, using tools that most closely resemble those of risk management used by financial, marketing or security companies. The best way to understand this is through the predictive forensics that the US is doing in Pakistan and Yemen, in targeted killings, where it is assumed that people will commit violence because pattern recognition shows that they will do it – even if they have not yet done it, but are targeted before they have the chance to. The pattern analysis undertaken by the US in Pakistan and Yemen scans various bits of data about people's lives – for example, their movement along certain roads determined by the Pentagon to be "toxic", telephone calls to specific numbers, or congregation in particular religious buildings – for patterns that might correspond to a "signature" of behaviour that the US associates with militant activity.[11] Under this practice, referred to as "signature strikes", the US targets people who are determined by an algorithm to pose an "imminent risk", without their identities or names being known.[12] That is predictive forensics. Predictive forensics is a line of forensics that it also familiar to climate science. The evidence is from the present, but the destruction is in the future. Patterns are non-hierarchical with regard to time. You can look at the future and at the past. You can estimate and evaluate potential vulnerability as they emerge. You could see that a combination of these factors usually leads to violence, and while it is not

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11 Columbia Law School Human Rights Clinic and Center for Civilians in Conflict, *The Civilian Impact of Drones: Unexamined Costs, Unanswered Questions*, report, 2012, pp. 8–9, available at: http://civiliansinconflict.org/uploads/files/publications/The_Civilian_Impact_of_Drones_w_cover.pdf.

12 For more on the practice of signature strikes, see Kevin Jon Heller, "'One Hell of a Killing Machine': Signature Strikes and International Law", *Journal of International Criminal Justice*, Vol. 11, No. 1, 2013, available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2169089.

deterministic, you could say that vulnerabilities will be emerging in this location in the future. So it becomes tactical, operational, rather than legal. The law is quite clear. The law will judge on the past, not on the future.

In 2014, Forensic Architecture began developing open-source software called PATTRN in a project coordinated by Francesco Sebregondi. PATTRN was designed as a crowdsourced platform that allows activists to upload information and then map relations between discrete events, identifying patterns and trends in time and space. PATTRN was conceived to enable citizen-driven participatory mapping. Our aim was to support sharing and collation of first-hand reporting of events by the very people who are subjected to violence, to assemble that data and to produce analysis, eventually bypassing the need for professional investigators on the ground. Crowdsourcing this type of information requires safeguarding the anonymity of users. Data protection is key, and the anonymization technologies that we employ are the main condition of participation in situations when identification of researchers could be risky. Because of this, verification of data can be undertaken not by tracing the provenance of evidence back to the identity of users, but by peer-to-peer correction with minimal editorial oversight. This allows us to minimize the danger for users without rendering the tool vulnerable in court.[13]

PATTRN is employed by several organizations. Some require pattern analysis for identifying trends in past data. For example, the International Criminal Court in The Hague, which is considering opening proceedings against Israel for the 2014 Gaza war, needed to undertake pattern analysis to determine if violations were "widespread and systematic" and has been studying the database of attacks during this war processed by Forensic Architecture software.[14] But pattern analysis can also be used to provide general predictions and indications of where and when vulnerabilities might be expected. Organizations working on the risk to migrants in the Mediterranean used PATTRN to identify the convergence of categories that would help identify such emergent risks or where people might most likely be intercepted or left to die.[15] The accuracy of prediction is based on the quality and quantity of data. Any result needs to be treated with caution, merely as a tactical indicator of possibility. But pattern analysis in the human rights context might open the way for forensic techniques to be used not only for studying the past, but also, tactically, in a predictive manner, oriented toward the future.

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13 PATTRN is available at: http://pattrn.co/.
14 See FSBRG, "ICC Gaza Methods and Findings, Presentation at the International Criminal Court", available at: https://fsbrg.net/icc-gaza-methods-findings.
15 See Forensic Architecture, *The Left-to-Die-Boat*, available at: www.forensic-architecture.org/case/left-die-boat/.

Future war in cities: Urbanization's challenge to strategic studies in the 21st century

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Abstract

This article argues that, despite an ongoing global revolution in urban demography, most Western military research into urbanization is narrowly focused and remains disengaged from the interdisciplinary expertise of urban studies. Because so many cities are sui generis *in terms of their governance, architectural design and demographic composition, the art of war must seek closer interaction with the science of cities. In the coming years, in order to control armed violence and reduce casualties across an urbanizing world, military analysts must seek greater cooperation with urban specialists. The common aim must be to develop an urban-oriented strand of strategic studies that is firmly based on a sophisticated understanding of the ecology of cities. Such a cooperative approach will assist in the development of military methods of operating in cities using appropriate rules of engagement that embrace international humanitarian law.*

Keywords: cities, megacities, urbanization, war in cities, strategic studies, science of cities, urban development.

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One of the continuing weaknesses of Western strategic studies is the paucity of serious research on the role of the city in armed conflict. This is not a novel situation. In the 1990s, when the Revolution in Military Affairs was the research area *du jour*, the urban dimension of warfare was overshadowed by notions of networked warfare on open terrain. After 2001, the long wars in Afghanistan and Iraq saw urban military research either absorbed or eclipsed by an avalanche of material on population-centric counterinsurgency and hybrid warfare. In the second decade of the new millennium, little has changed. As we move away from an era dominated by Near East land wars into an Asia-Pacific century, it seems likely that offshore maritime strategies, naval power and long-range precision strikes – all of which play to the West's traditional technological strengths – may become the main future warfare priorities for liberal democracies such as the United States, Britain and Australia.[1]

The above serves as a useful reminder that despite the global revolution in urbanization that is now occurring, many Western militaries remain cautious about embracing urban warfare as a central mission. They have good reasons for such caution. In the Western military canon, all the tenets of modern theory and practice run counter to engaging in war in cities except as a last resort.[2] Doctrinal reservation is likely to be reinforced by war weariness, caused by long campaigns and their fiscal burden. Some leading Western armies are in the process of recovering from over a decade of protracted operations in the mountains of Afghanistan and the cities of Iraq. Moreover, in an era of economic austerity stemming from the 2008 global financial crisis – when Western armies have been forced to dramatically downsize in numbers and to reduce personnel costs – the suggestion that urban warfare in far-flung countries will be a future military priority involving large numbers of soldiers and expensive equipment is hardly welcome news to democratic electorates or their political representatives.

Add to these concerns the continuing demographic reality of ageing populations, rising health and welfare costs, and homeland security and immigration challenges, and one is confronted by a Western domestic political agenda that in no conceivable way favours armed forces establishments with large-scale urban operations as a major focus for force structure requirements and budgetary priorities. And yet, it is an indisputable reality that the world is urbanizing and that by 2050, two thirds of the human race will live in cities. We are faced, then, with a clear disparity between the geopolitical phenomenon of mass urbanization and the apparent unwillingness of many Western countries to prepare their armies to meet the likelihood of increased urban operations across

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1   For the shift towards maritime warfare in Western countries, see Peter D. Haynes, *Towards a New Maritime Strategy: American Naval Thinking in the Post-Cold War Era*, Naval Institute Press, Annapolis, MD, 2015; Chris Parry, *Super Highway: Sea Power in the 21st Century*, Elliot and Thompson, London, 2014; Michael Evans, *The Third Way: Towards an Australian Maritime Strategy for the Twenty-First Century*, Army Research Paper No. 1, Directorate of Future Land Warfare, Commonwealth of Australia, Canberra, 2014.

2   For a historical overview, see Gregory J. Ashworth, *War and the City*, Routledge, London, 1991.

the spectrum of armed conflict, from humanitarian relief through stabilization missions to conventional warfare.[3]

What, then, is to be done? This article argues that a first step must be to understand the breadth of the urban challenge. Much greater conceptual clarity than exists at present is required to guide strategy, policy and operations for urban contingencies in the future. A rigorous intellectual framework must be developed, aimed at understanding the process of urbanization and determining what it may or may not mean for international security and the use of military force in the years ahead. To this end, two areas are examined. First, the process of global urbanization is summarized, with an emphasis on its variety and complexity. It is argued that there is no such phenomenon as a single urban future and, as a result, there can be no specific security solution and still less any single urban military posture. Second, if Western militaries are likely to face increasing operations in cities in coming years, long-term research must be conducted to investigate realistic "economy of force" approaches in order to align policy requirements, technological capabilities and human resources for a wide array of potential missions. Western defence establishments must embrace a form of multidisciplinary urban strategic studies to inform both their policy decisions and their military doctrinal considerations. Focusing on anarchy in "population-centric megacities" replete with *Mad Max*-style adversaries, as promoted by parts of the electronic media and popular literature, is a facile and misleading basis for serious research. What Western armed forces require are broad, not narrow research approaches; they need to invest in carefully integrated lines of inquiry which reflect the in-depth and lasting cross-disciplinary efforts required to develop a credible strategic agenda for the use of force in cities. Such an agenda will assist in using lethal force in a manner that reduces civilian casualties and which upholds humanitarian and legal norms in armed conflict.

"No single future for cities": The process of global urbanization

In 1950, the population of the world was two-thirds rural and one-third urban.[4] By 2050, it is estimated that global demographic distribution will be almost the exact reverse of a century ago, at 34% rural and 66% urban. Some 90% of all urban growth is occurring in Asia and Africa, with 70 million people annually becoming residents of a city somewhere on those two continents.[5] If research estimates are

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3   For the background to contemporary issues surrounding urban warfare, see Alice Hills, *Future War in Cities: Rethinking a Liberal Dilemma*, Frank Cass and Routledge, London, 2004; Stephen Graham (ed.), *Cities, War and Terrorism: Towards an Urban Geopolitics*, Blackwell, Oxford, 2004.
4   UN Department of Economic and Social Affairs, *World Urbanization Prospects: The 2014 Revision – Highlights*, New York, 2014 (2014 World Urbanization Prospects), p. 1.
5   See *ibid.*, pp. 7–9 and Annex, p. 20 ff. By 2050 it is estimated that 52% of the global population will be located in Asia and 21% in Africa.

correct, the world's urban population will increase from 3.9 billion in 2014 to 6.3 billion in 2050.[6]

There can be little doubt that, in terms of demographic change, the movement of people from countryside to city represents a revolution of historic magnitude.[7] Not surprisingly, the transformation from rural to urban demographic predominance has spawned an intense debate on the implications for the world's future economic structure and geopolitical stability.[8] There are visions of both dystopia and utopia. For some security analysts, urban migration and city growth are seen as a prescription for growing anarchy, violent political breakdown and ecological decline throughout the developing world. Pessimists foresee a coming era of "feral cities" or of huge "population bombs", in which armed conflict will occur mainly in sprawling megalopolises from Karachi and Dhaka in Asia to Kinshasa and Lagos in Africa.[9] US writers P. H. Liotta and James F. Miskel argue that twenty-first-century megacities – usually defined as cities of over 10 million inhabitants – will emerge as unprecedented phenomena, at once "overwhelmed, dangerous, ungovernable … unlike anything the earth has ever seen".[10] Another US author describes war in megacities as follows:

> [We face] [h]igh-tech warfare at knife-fight ranges …. [I]magine a megacity of 10 or 20 million, where the slums have more inhabitants than some countries … [a place] where suspicious locals post every US military movement on Twitter with digital photos and GPS-precise coordinates. Imagine roadside bombs that *fly* because the bad guys downloaded blueprints for a kamikaze mini-drone and built it with their 3-D printer.[11]

While such a dystopian future is a possibility for some non-Western megacities, much of the urban studies research tends to be far more positive, even utopian,

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6   *Ibid.*, pp. 1, 11–12.
7   See Shlomo Angel, *Planet of Cities*, Lincoln Institute of Land Policy, Cambridge, MA, 2012; McKinsey Global Institute, *Urban World: Mapping the Economic Power of Cities*, March 2011 (Economic Power Report), available at: www.mckinsey.com/global-themes/urbanization/urban-world-mapping-the-economic-power-of-cities (all internet references were accessed in October 2016); McKinsey Global Institute, *Urban World: Cities and the Rise of the Consuming Class*, June 2012 (Consuming Class Report), available at: www.mckinsey.com/global-themes/urbanization/urban-world-cities-and-the-rise-of-the-consuming-class.
8   See Robert Muggah, *Researching the Urban Dilemma: Urbanization, Poverty and Violence*, International Development Research Centre, Ottawa, May 2012, p. vi; Joel Kotkin, "Urban Legends: Why Suburbs, not Cities, are the Answer", *Foreign Policy*, 6 August 2010, available at: foreignpolicy.com/2010/08/06/urban-legends/; Joel Kotkin et al., *The Problem with Megacities*, Chapman University Press, Center for Demographics and Policy, Orange, CA, 2014, available at: www.chapman.edu/wilkinson/_files/MegaCitiesUPDATED%20VERSION.pdf.
9   For dystopian views, see Richard J. Norton, "Feral Cities", *Naval War College Review*, Vol. 56, No. 4, 2003; Roy Woodbridge, *The Next World War: Tribes, Cities, Nations and Ecological Decline*, University Press of Toronto, Toronto, 2004, pp. 78–80; Stephen Graham, *Cities Under Siege: The New Military Urbanism*, Verso, New York, 2011; Peter H. Liotta and James F. Miskel, *The Real Population Bomb: Megacities, Global Security and the Map of the Future*, Potomac Books, Washington, DC, 2012; David Kilcullen, *Out of the Mountains: The Coming Age of the Urban Guerrilla*, Oxford University Press, New York, 2013, Ch. 5.
10 P. H. Liotta and J. F. Miskel, above note 9, p. 7.
11 Sydney Freedberg Jr., "Army Grapples with Cyber Battles in Mega-Cities", *Breaking Defense*, May 2014, available at: breakingdefense.com/2014/05/army-grapples-with-cyber-age-battles-in-megacities/.

in tone and outlook. In sharp contrast to dystopian security analysts, many urban specialists view the transition from a rural to an urban world as one of the twenty-first century's most encouraging drivers of economic growth and social mobility. The demographic shift to city living may offer solutions to help alleviate long-term poverty and political instability in diverse countries, from Asia through Latin America to parts of the Middle East and Africa.[12] Using a progressive lens, the global process of urbanization is viewed by many urban scholars as a means of strengthening the three traditional pillars of sustainable development: economic growth, social stability and environmental protection. As one 2014 United Nations (UN) research report notes:

> Cities are important drivers of development and poverty reduction in both urban and rural areas, as they concentrate much of the national economic activity, government, commerce and transportation, and provide crucial links with rural areas, between cities, and across international borders. Urban living is often associated with higher levels of literacy and education, better health, greater access to social services, and enhanced opportunities for cultural and political participation.[13]

In Africa and Asia, the two continents that will account for the swiftest pace in world urbanization over the next three decades, just three countries – India, China and Nigeria – are expected to account for 37% of the world's metropolitan growth out to the year 2050.[14] Indeed, within the next fifteen years, several Asian cities are likely to overtake US and European cities in prosperity. Based on current trends, by 2030, nine of the world's wealthiest twenty-five cities will be located in Asia. Shanghai and Beijing are expected to outrank Los Angeles and Paris in wealth, while Delhi and Bangkok are likely to surpass Detroit and Barcelona as economic hubs. By the early 2030s, some $30 trillion or 65% of global gross domestic product (GDP) will be generated by some 600 cities, over a third of which will be in the developing world.[15]

The growing cities of the developing world are, however, unlikely to follow any single pattern of growth. There is no "single future of cities" or one-size-fits-all program for urban development, and in many respects we may be entering a new analytical field – namely, the "science of cities". As one British report notes, "the science of cities is still emerging and has not yet generated global language norms. It is also an inter-disciplinary science, and this makes clarity of concepts harder to achieve."[16] Cities are simultaneously places of safety, resilience and opportunity and yet also homes to violence, inequality and squalor. Over the next

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12 See Saskia J. Sassen (ed.), *Cities in a World Economy*, 4th ed., Pine Forge Press, Thousand Oaks, CA, 2011; Joel Kotkin, *Cities: A Global History*, Weidenfeld and Nicolson, London, 2005, especially Part 6; Neil Brenner and Roger Keil (eds), *The Global Cities Reader*, Routledge, New York, 2006.
13 2014 World Urbanization Prospects, above note 4, p. 3.
14 *Ibid.*, p. 1.
15 Economic Power Report, above note 7, pp. 17–20, 27–28, 30; Consuming Class Report, above note 7, p. 1.
16 Emily Moir, Tim Noonen and Greg Clark, *What are Future Cities? Origins, Meanings and Uses*, paper, UK Government Office for Science, Foresight Future of Cities Project, London, June 2014, p. 5.

quarter of a century, urban conglomerations are likely to reflect a bewildering and eclectic variety of sizes, shapes and spatial density alongside a plethora of differences in types of governance, demographic composition, economic growth and regional distribution. In the emerging science of cities, it seems as if hypothesis and heterogeneity will prevail over paradigm and homogeneity.[17]

Future urban conurbations will embrace a range of forms, including megacities, larger cities and middle-sized and small city complexes, with each metropolitan type displaying different developmental and governance levels. Despite a focus on the dramatic phenomenon of a few megacities with populations of over 10 million by parts of the Western media and military, most of the world's urbanization is more prosaic and is concentrated on a plethora of medium-sized and small cities. For example, at present, half of all the world's urbanites live in settlements of less than 500,000 people, with only one in eight persons inhabiting a megacity.[18] In 2014, medium-sized cities accounted for twenty-six of the world's forty-three fastest-growing cities, and their collective populations are likely to increase from 363 million to 509 million people by 2030 – accounting for around 10% of urban residents. Similarly, smaller rather than larger cities are likely to proliferate in the developing world. "Cities with populations of less than half a million", one report notes, "will remain highly significant everywhere, remaining home to almost half of the world's urban population by 2030."[19]

In China and India, a wave of smaller, high-technology "smart" cities is being constructed with the aim of creating urban systems that can act as catalysts and hubs for advanced urban infrastructure, transportation and economic services. For example, by 2025, it is estimated that of 136 smaller cities throughout Asia, 100 smart cities will be located in a fast urbanizing China.[20] As Thomas J. Campanella observes, when it comes to the promotion of new cities, China's energetic approach is akin to "a hundred Dubais, with a thousand times its ambition".[21] Even countries in Africa – a continent often associated by security analysts with poorly governed megacities such as Lagos and Kinshasa – are experimenting with smaller city conurbations. For example, in Kenya, Konza Techno City, dubbed the "Silicon Savannah", and Tatu City – both located outside metropolitan Nairobi – represent newer, smaller and more decentralized complexes that are seen as models for urban development in the future.[22]

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17 Emily Moir, Tim Noonen and Greg Clark, *The Future of Cities: What is the Global Agenda?*, paper, UK Government Office for Science, Foresight Future of Cities Project, London, September 2014, pp. 35–50, 152–153.

18 *Ibid.*, p. 13.

19 *Ibid.*, pp. 11–12.

20 *Ibid.*, pp. 2, 11–12, 17; Alberto Vinolo, "Smartmentality: The Smart City as Disciplinary Strategy", *Urban Studies*, Vol. 51, No. 5, 2014.

21 Thomas J. Campanella, *The Concrete Dragon: China's Urban Revolution and What It Means for the World*, Princeton Architectural Press, New York, 2008, p. 15.

22 Jo Beall, Tom Goodfellow and Dennis Rodgers, *Cities, Conflict and State Fragility*, Working Paper No. 85, Crisis States Working Papers Series No. 2, Crisis States Research Centre, London School of Economics, London, January 2011.

The global pattern of migratory diversity from countryside to city runs counter to the notion advanced by some security analysts that megacities will be the dominant form of urban development and are the harbingers of a new form of international instability.[23] Such a view is not supported by evidence. As the urban specialist Joel Kotkin argues, the pattern of urban migration in the developing world is not concentrated on megalopolises, but is diverse and multidirectional and involves a maze of different-sized cities.[24] In 1990, there were ten megacities with 153 million people, representing 7% of the globe's urban dwellers. In 2014, there were twenty-eight megacities, including Tokyo, Delhi and Shanghai, with 453 million people, accounting for 12% of urbanites.[25] While megacities are expected to multiply from twenty-eight to forty-one by 2030, it seems unlikely that this particular urban form will predominate globally. Even if megacity populations double over the next fifteen years, they will still represent only a quarter of the global urban population. In 2011, the McKinsey Global Institute, a leading authority on global urbanization, cautioned:

> It is a common misperception that megacities have been driving global growth for the past 15 years. In fact, most have not grown faster than their host economies, and [McKinsey] expects this trend to continue. Today's 23 megacities … will contribute just over 10 percent of global growth to 2025, below their 14 percent share of global GDP.
>
> In contrast, 577 fast-growing middleweights … are seen contributing more than half of global growth to 2025, gaining share from today's megacities.[26]

In 2012, McKinsey identified an "Emerging 440" cities grouping that is projected to generate 47% of global growth, or $17.7 trillion, to 2025 and beyond.[27] Only twenty are categorized as megacities, with the remainder being middleweight urban centres. Of these middleweights, over 200 are in China; fifty more are located in Latin America; and thirty-nine are found in Africa and the Middle East. In many of these middleweight cities, growth is driven less by population density than by per capita GDP and by the number, rather than the demographic size, of individual households.[28] In 2014, research conducted by the UN endorsed McKinsey's findings, observing that by 2030 there might well be forty-one megacities but that "the fastest growing urban agglomerations are medium-sized cities and cities with less than one million inhabitants located in Asia and Africa".[29] As social scientist Saskia J. Sassen observes, what really matters when analyzing the anatomy of

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23 P. H. Liotta and J. F. Miskel, above note 9, p. 9.
24 J. Kotkin *et al.*, above note 8, pp. 16–17.
25 2014 World Urbanization Prospects, above note 4, p. 13.
26 Economic Power Report, above note 7, p. 4.
27 Consuming Class Report, above note 7, pp. 5–6, 19.
28 *Ibid.*, pp. 5–6, 19; Mathew Burrows, *The Future, Declassified: Megatrends that Will Undo the World Unless We Take Action*, Palgrave Macmillan, New York, 2014, pp. 89–90.
29 2014 World Urbanization Prospects, above note 4, p. 1; Economic Power Report, above note 7, pp. 14–17, 28–31.

urban growth is less a city's demographic density than its political and economic effectiveness.[30]

Urbanization and military strategy: The case for urban strategic studies

Despite the complex and multi-varied pattern of urbanization outlined above, recent Western military research on urban warfare is narrowly focused on operating in megacities. The latter are believed by many security analysts to pose the most dangerous and demanding urban environment for Western forces in the future. Good examples of this type of research include the US Army's 2014 study *Megacities and the United States Army*, and the US Marine Corps' 2015 *Security Environment Forecast*.[31] The US Army report claims that in the twenty-first century, megacities represent a "fundamentally new operating environment" that will increasingly defy the military's ability to apply traditional methods of urban warfare and will provide "the strategic key terrain in any future crisis that requires US military intervention".[32]

Similarly, in its section on urbanization, the Marine Corps *Security Environment Forecast* states: "If current patterns and trends [in urbanization] continue, the world will reorient centred on massive, multifaceted urban clusters. Three-quarters of the world's population will live in cities and there will be forty-one megacities worldwide by 2030, making urbanized warfare unavoidable."[33] Such a situation means that conflicts in megacities will force adversaries not only to master the three-block war but also to think vertically and adapt to "three-floor wars".[34] Moreover, urban littorals will become of particular importance in the future because coastlines or coastal deltas host some 136 major port cities as well as eight of the world's ten largest cities.[35]

Much of the US Army and US Marine Corps research tends to treat the megacity as a novel phenomenon – an urban conurbation so different in form that it is disconnected from all previous modes of urban operations. Such a premise is both historically incorrect and misleading. Modern urban evolution is a process that has been occurring since the rise of the nineteenth-century

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30 Saskia J. Sassen, "The Urban Complex in a World Economy", *International Social Science Journal*, Vol. 46, No. 1, 1994.
31 US Office of the Chief of Staff of the Army, *Megacities and the United States Army: Preparing for a Complex and Uncertain Future*, Strategic Studies Group, Megacities Concept Team, Arlington, June 2014 (US Army Megacities Paper); US Marine Corps, *2015 Marine Corps Security Environment Forecast: Futures 2030–2045*, Futures Directorate, USMC Futures Assessment Division, Quantico, VA, 2015 (US Security Environment Forecast).
32 US Army Megacities Paper, above note 31, pp. 5, 8.
33 US Security Environment Forecast, above note 31, p. vii. For the military debate over megacities, see Kevin M. Felix and Frederick D. Wong, "The Case *for* Megacities", *Parameters: US Army War College Quarterly*, Vol. 45, No. 1, 2015; Michael Evans, "The Case *against* Megacities", *Parameters: US Army War College Quarterly*, Vol. 45, No. 1, 2015.
34 US Security Environment Forecast, above note 31, p. vii.
35 *Ibid.*, pp. 54–59.

industrial city of steel and coal. Armed forces establishments have always sought to adapt older methods of city warfare to new metropolitan conditions of mass living, spatial expansion and industrial technologies. There is a pattern of tactical development in urban warfare that runs from the principles of controlling streets and buildings – first outlined by the French soldier Marshal Thomas Bugeaud in his 1847 primer, *La guerre des rues et des maisons* – through the World War II battles in cities such as Stalingrad, Manila and Gröningen to more recent encounters in Grozny, Fallujah and Mosul. Historically, while most conventional armies dislike urban warfare, once they are faced with the grim prospect of fighting in built-up areas they tend to adapt to the challenge with all the accompanying demands for large numbers of troops, decentralized tactics and heavy expenditure in logistics and munitions.[36]

While there are commonly understood methods for military operations conducted in cities involving fire and movement, it is a well-known and time-honoured reality that urban warfare involves an essential recognition of diversity. Confronted by an urban area, all militaries must confront "an endless variety of structures and facilities the seizure or control of which demands esoteric plans, programs, and procedures, since no two cities are quite alike".[37] The modern Western military's long-standing understanding of urban diversity has been influential in persuading operational planners – from Stalingrad through Hue to Fallujah – to focus on the role performed by troops rather than the environment inhabited by them. Troops must be multifunctional and able to fight across different forms of terrain, both rural and urban. A military focus on one urban form – namely that of megacities as representing a completely novel phenomenon – runs contrary to the basic principles of modern urban military operations. It is no accident that those who have been most successful in cities have been well-trained military forces capable of adaptation – whether US marines in Manila and Fallujah, British infantry in Belfast and Londonderry or French paratroops in Algiers.[38]

Faced by the revolution in urbanization, twenty-first-century militaries must avoid narrow research focused on megacities and move to engage with the broad field of urban studies.[39] If this engagement does not occur, military research will almost certainly become flawed. Contrary to recent US military claims on megacities, the relationships between instances of rapid urban growth and outbreaks of armed

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36 Maréchal Bugeaud, *La guerre des rues et des maisons*, unpublished manuscript presented by Maité Boussy, Jean-Paul Rocher, Paris, 1997. This is significant as the first professional military study of a modern, industrial-age city. For the evolution of modern urban warfare and speculations on the future, see Michael Evans, "Lethal Genes: The Urban Military Imperative and Western Strategy in the Early Twenty-First Century", *Journal of Strategic Studies*, Vol. 32, No. 4, 2009; Michael Evans, *City Without Joy: Urban Military Operations into the 21st Century*, Occasional Paper No. 2, Australian Defence College, Canberra, 2007; M. Evans, above note 33, pp. 33–43.

37 John Collins, *Military Geography for Professionals and the Public*, National Defence University Press, Washington, DC, 1998, p. 195.

38 M. Evans, above note 33, pp. 33–43; M. Evans, "Lethal Genes", above note 36, pp. 534–535.

39 For those interested, useful from a strategic studies perspective are S. J. Sassen, above note 12; Neil Brenner and Roger Keil (eds), *The Global Cities Reader*, Routledge, New York, 2006; J. Kotkin, above note 12.

violence are not clear-cut. In understanding the anatomy of armed violence in diverse urban conglomerations, correlation and causation must be carefully distinguished and separated. For example, cross-disciplinary studies by urban analysts suggest that city fragility and organized violence in the developing world are less a function of metropolitan size and demographic density than of the existence of effective governance.[40] If there is a correlation between the process of urbanization and the incidence of violence in large cities, it has more to do with a linkage between weak State institutions and fragile cities. Much research indicates that "legacies of armed conflict, political authoritarianism and repressive policing are [tightly correlated] with the onset and persistence of urban violence".[41]

The capacity of a State's institutions is often intimately connected to the strength or weakness of metropolitan governance, and this factor plays a major role in determining the outbreak of armed violence in cities.[42] Armed violence may, of course, be exacerbated by metropolitan size and by population numbers, but it is seldom caused by these factors. Rather, weaknesses in governance ranging from political maladministration through to corrupt militaries and ineffective policing are often major causative factors in the breakdown of urban society.[43] While megacities may generate a range of negative consequences for their urban underclass, including crime, disease and squalor, organized violence by armed groups is not always one of these.[44] It is important to note that fast-growing Asian megacities such as Beijing and Calcutta are among the world's most stable urban conglomerations. Likewise, massive cities such as Bogota or Sao Paulo in Latin America have both experienced not only spikes but also instances of decline in outbreaks of armed violence.[45] In his 2012 work, *Researching the Urban Dilemma: Urbanization, Poverty and Violence*, Robert Muggah observes:

> Although in absolute terms more people may face poverty and insecurity in large and mega-cities, it is in fact medium- and small-sized cities in the developing world which are even more at risk [from violent breakdown]. This is because they are generally less well-resourced in terms of professional capacity, governance and finance. Their vulnerability is also greater because of more limited investment in infrastructure and urban services …. In addition, there is less experience of working with humanitarian and development actors and other international agencies.[46]

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40   Alan Gilbert, *Urbanization and Security*, Comparative Urban Studies, Occasional Paper No. 31, Woodrow Wilson International Centre for Scholars, Washington, DC, 1999, pp. 16–17; Robert Muggah, "How Fragile are Our Cities?", *World Economic Forum*, 2016, available at: www.weforum.org/agenda/2016/02/how-fragile-are-our-cities; Kevin Savage and Robert Muggah, "Urban Violence and Humanitarian Action: Engaging the Fragile City", *Journal of Humanitarian Assistance*, 19 January 2012, available at: sites.tufts.edu/jha/archives/1524. For a recent perspective on security in cities, see Stephen Graham, *Vertical: The City from Satellites to Bunkers*, Verso, London, 2016, pp. 67–95.

41   R. Muggah, above note 8, p. 49.

42   *Ibid.*, pp. 49, 66.

43   *Ibid.*, pp. vii–ix.

44   K. Savage and R. Muggah, above note 40.

45   R. Muggah, above note 8, p. 11.

46   *Ibid.*, p. 69.

In short, there is nothing that is certain or inevitable about armed violence in cities in general or in megacities in particular. From a security perspective, military researchers must learn to distinguish between the global city of influence, the megacity of sprawl and the emerging middleweight city, and between smaller peri-urban, semi-urban and inner-urban forms of human habitation. All are different. Indeed, when it comes to assessing the frequency and character of insecurity in a diverse range of cities, generalizations are misleading and good research will seek to adopt a strictly evidence-based approach.[47]

The different conclusions about armed violence and megacities reached by military professionals and urban specialists are evidence both of a lack of communication and of misunderstanding. In considering the likelihood of future urban military operations, there is little common ground between policy-makers and security specialists on the one hand and urban development, aid and humanitarian agencies on the other. As Muggah notes, "the growing preoccupation with the urban dilemma amongst diplomats, development and defense sectors is not … matched with commensurate investment in research".[48] It is certainly true that current research into city development remains parochial and stove-piped, with security specialists and urban analysts possessing different outlooks, interests and methodologies.

Three distinct schools of thought on research into cities can be identified. The first is practised by quantitative macro-level researchers who focus mainly on collecting statistical data and whose ranks include criminologists, epidemiologists, economists and social scientists. The second school is that of qualitative micro-level researchers, which tends to be more concerned with field research and case studies and which includes historians, urban geographers, political scientists and sociologists. Finally, there is a security-oriented research school, a category that embraces military professionals, defence analysts and an array of affiliated social scientists.[49] All three schools tend to operate independently of each other, but this is markedly so in the security dimension. The security-oriented school of urban research tends to be focused on narrow operational and technological issues rather than broader strategic considerations. Operational research and analysis embraces the refinement of combined arms operations for a non-linear city environment, mastering close-quarter battle methods and better use of protected mobility in built-up areas. Similarly, technological research involves areas such as the employment of thermobaric weapons and precision munitions; the future role of robotics, drones and unmanned vehicles in cities; the exploitation of fibre-optics, laser range finders and counter-sniping devices in urban micro-environments; and the potential for non-lethal weapons usage in heavily populated urban areas.[50] In

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47 M. Evans, "Lethal Genes", above note 36, pp. 540–552; Alexandre Vautravers, "Military Operations in Urban Areas", *International Review of the Red Cross*, Vol. 92, No. 878, 2010.
48 R. Muggah, above note 8, p. vi.
49 *Ibid*., pp. 9–10.
50 For useful insights, see R. Muggah, above note 8; Ian Kemp, "Urban Warfare: Complete Guide", *Armada International*, Vol. 32, No. 4, Supplement, 2008; Paolo Valpolini, "Urban Warfare: High-Tech Take-Over", *Armada International*, Vol. 34, No. 4, Compendium Urban Warfare Supplement, 2010.

contrast to these operational and technological efforts, urban security specialists have made few attempts to synthesize relevant strands of urban research into a form of strategic studies that might inform the judgments of both policy-makers and military practitioners. As a result, an ability to assess the roles of military forces in cities against different typologies of urban violence remains underdeveloped. Issues of legal obligation and rules of engagement as applied to stabilization operations and humanitarian relief; civil–military relationships in command and control functions; the roles of policing and community elites; and the nexus between national and metropolitan governance – all key areas of knowledge – remain under-researched.[51]

In the coming years, if we are to better understand the city as an armed conflict zone, an urban-oriented strand of strategic studies needs to be developed by security scholars working in close conjunction with the macro- and micro-level schools identified earlier. Achieving such an interdisciplinary effort may prove to be challenging for scholars who harbour sensitivities towards the employment of military force in populated areas. Indeed, we should not forget the adverse reaction of many anthropologists and other social scientists toward the development of human-terrain mapping in counterinsurgency after 2004. Yet, if urban studies scholars refuse to engage with security officials on the challenge of controlling and ameliorating armed violence in cities, they are only likely to contribute by default to increased, not decreased, numbers of civilian casualties.[52]

Given the requirements of operating in cities with civilian populations under the ever-present eye of a global electronic media, Western militaries will require assistance from urban specialists in order to formulate the kind of operational methods appropriate for a range of cities – methods that conform to international humanitarian law, also known as the law of armed conflict – and which reflect credible rules of engagement respecting the lives of non-combatants. One useful area in which city specialists in law enforcement and community development can assist military professionals is what might be styled the fluidity nexus between "high-end" policing and "low-end" military responses in cities. A comprehensive understanding of a particular urban environment will be important in determining how a crisis situation can be better conceptualized by security professionals in order to meet conditions where neither a purely military nor a traditional policing approach seems immediately obvious.[53]

In all cases, the integration of urban studies into strategic requirements needs to be conducted with both intellectual care and humane discrimination. An understanding of different typologies of violence is critical. Security analysts and

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51 R. Muggah, above note 8, pp. vii–ix, 5–7.
52 For the reluctance of anthropologists to engage with security officialdom, see David H. Price, *Weaponizing Anthropology: Social Science in the Service of the Militarized State*, Counterpunch, Petrolia, CA, 2011; John D. Kelly *et al.* (eds), *Anthropology and Global Counterinsurgency*, Chicago University Press, Chicago, IL, 2010.
53 Brian Cox and Anna Powles, *Protecting Civilians in an Urban Conflict: Lessons Learned from Australia's Deployment Following the Timor-Leste Crisis, 2006–2007*, Centre for Defence and Security Studies, Massey University, Palmerston North, 2015, p. 2. See also Graduate Institute of International Studies, *Small Arms Survey: Guns and the City*, Cambridge University Press, Cambridge, 2007 (Small Arms Survey), pp. 178–188.

military professionals need to be able to distinguish between high-intensity crime by urban gangs and syndicates concerned with profit, and forms of low-intensity warfare by armed urban activists driven by politics. They also need to be able to differentiate between mass-casualty attacks by networked Islamist cadres on the Mumbai, Nairobi, Paris and Brussels models, and well-organized and prolonged campaigns of urban warfare by large non-State militias on the Hamas or Hezbollah models.[54]

There are clear differences between the Islamic State (ISIS) attacks in Europe in 2015–16[55] and the capability of a force like Hamas to engage the Israeli military in a semi-conventional struggle as it did in the 2014 Gaza War.[56] Unlike the ISIS cells that struck against civilian targets in Paris and Brussels with AK-47 assault rifles and suicide belts, Hamas represents a formidable non-State organization with an armed militia wing (the Qassam Brigades) equipped with an arsenal of rockets, anti-tank guided munitions and anti-air missiles that gives it a capacity for protracted operations in heavily populated urban environments.[57] In 2014, the reality of a Hamas base amidst the Gaza population forced the Israelis to adopt a restricted targeting methodology for air strikes using both low-yield precision munitions and non-lethal explosives to reduce non-combatant casualties, facilitate civilian evacuation and comply with international legal conventions.[58] Hamas successfully employed an underground assault tunnel network stretching for 70 kilometres in order to nullify Israel's aerial reconnaissance superiority and conceal the movements of its fighters, munitions and rocket attack sites. Air strikes could not neutralize this tunnel network, forcing the Israelis to deploy ground forces. In the Shejaiya stronghold in Gaza City, sixteen Israeli soldiers were killed and fifty wounded as the Israeli Defence Forces destroyed over thirty Hamas tunnels.[59]

The 2014 Gaza War demonstrated an array of issues that may dominate future Western interventions in cities. These include the need to nullify subterranean networks, the requirement of an effective information campaign, and the challenge of engaging an adversary that, while weaker militarily, is adept at employing the instruments of social media to win international support. Western armies that enter urban areas in future operations clearly need to be prepared to control the narrative of events by employing new technologies for the information domain, including not only social media tools but also wide-area, full-motion battlefield video surveillance systems.[60] In an ominous development,

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54 M. Evans, above note 33, pp. 41–43.
55 See David E. Johnson, *Hard Fighting: Israel in Lebanon and Gaza*, RAND Corporation, Santa Monica, CA, 2011; Will McCants, *The ISIS Apocalypse: The History, Strategy and Doomsday Vision of the Islamic State*, St Martin's Press, New York, 2016.
56 For a military operational analysis, see Gaza Conflict Task Force, *Gaza War Assessment: The New Face of Conflict*, report, Jewish Institute for National Security Affairs, Washington, DC, March 2015 (Gaza Report); Eitan Shamir, "The 2014 Gaza War: Rethinking Operation Protective Edge", *Middle East Quarterly*, Spring 2015.
57 Gaza Report, above note 56, p. 10.
58 *Ibid.*, pp. 10–11.
59 *Ibid.*, pp. 19–20, 25–27.
60 *Ibid.*, pp. 13, 20

Hamas also experimented with primitive "model airplane" unmanned aerial vehicles (UAVs) during the Gaza War. In the years to come, this form of stand-off technology can only evolve and proliferate through commercial outlets. Over time, non-State groups such as ISIS and Al-Qaeda will surely acquire small drones as a non-State equivalent of a precision munition that can gather real-time intelligence and strike rapidly. As a result, Western militaries will need to consider developing counter-UAV networks – perhaps using laser technology – in order to deal with this new threat.[61]

In the future, given limited troop numbers, advanced militaries are unlikely to engage in frontal assaults in urban areas except under the most favourable circumstances. As retired US Army general Robert Scales has cautioned, policy-makers need to be constantly aware of one uncomfortable truth when considering the insertion of troops into cities: "America's treasure house of close-combat soldiers is only marginally larger than the New York City Police Department."[62] Proportionally, when it comes to available infantry and combined arms assets, other Western armies, such as those of Britain, France and Australia, face a similar situation to that of the United States, and this reality places a premium on economy of force operations. From this perspective, robotics, high-altitude UAVs, precision strikes and special operations forces all recommend themselves in the coming years.[63]

There are many diverse kinds of urban contingencies to consider in a wide range of localities: from all-out combat operations through humanitarian relief and the creation of protected enclaves and evacuation corridors for civilians and other non-combatants to over-the-horizon littoral missions. The Western requirement is for a discriminate range of direct and indirect urban strategies that are based on the level of political interests involved and judged on a case-by-case basis. A discriminate strategy might embrace containment of volatile cities; urban humanitarian evacuation and relief of threatened population groups by joint, interagency and multinational elements; the exploitation of high-technology assets for selective strikes; and the seizure of decisive points and nodes using joint forces.[64]

Conclusion

Because cities represent crucibles of civilization, it is uncomfortable to regard them as arenas for future armed conflict or as scenes of humanitarian emergency. From the Athens of Pericles, through the Florence of the Medici and the Paris of Picasso to the Berlin of Brecht, cities have always sought to celebrate the splendour of human culture and to avoid the inhumanity and squalor of armed conflict.[65] This situation is now challenged by the global revolution in urban demography and economic

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61 *Ibid.*, pp. 57–58.
62 Robert H. Scales Jr., "Urban Warfare: A Soldier's View", *Military Review*, Vol. 85, No. 1, 2005, p. 10.
63 M. Evans, above note 33, pp. 33–43.
64 Robert H. Scales Jr., "The Indirect Approach: How US Military Forces Can Avoid the Pitfalls of Future Urban Warfare", in *Future Warfare*, US Army War College, Carlisle Barracks, PA, 1999.
65 J. Kotkin, above note 12, p. xviii.

transformation that will unfold over the next three decades. While urban military operations of diverse types are likely to increase in future years, the broader security implications of the globe's urban revolution are far from clear. This is especially so in terms of identifying causation and correlation between urban development and the incidence of armed violence.

Despite the recent Western military fashion for concentrating on megacities as the "worst-case security environment", what is most striking for the learned strategist is the fluidity, variety, diversity and unpredictability involved in the process of global urbanization. As we come to grips with the notion of a world population that by 2050, in the mere space of a century, will change from being predominantly rural to being overwhelmingly urban, there is no simple or singular template available to understand the anatomy of urban conflict. Neither the science of war nor the science of cities offers a clear guide to urban studies specialists and security professionals. In order to achieve greater clarity of thought, the best way forward into the future is for more holistic analysis to occur through alliances forged between the different fields of urban studies and war studies in universities, think tanks, security research departments and military establishments.

Those concerned with urban conflict need to acquire a balanced and nuanced understanding of the ecology of the developing world's cities. Military practitioners and urban studies scholars must seek to avoid trading in a language that evokes either spectres of dystopia or visions of utopia. Such black-and-white polarities are misleading and fail to take account of the many shades of grey that are found in the diversity of city ecology. Many cities are *sui generis* in levels of governance, population composition and architectural design, and no single disciplinary perspective can capture the inherent complexities of using military force in an urban area.[66] Like the phenomenon of insurgency, in urban conflict, modern methods evolved for the use of force in cities must be constantly refined to meet an infinite variety of changeable urban contexts. In cities plagued by armed conflict, it is the particular and the heterogeneous that are likely to be more illuminating than the general and the homogenous.

From a security perspective, then, the true novelty involved in militaries operating in twenty-first-century urban areas lies less in developing operational methodologies for megacities than in the task of evolving and integrating doctrine and concepts for the varied and multidisciplinary field of Western urban strategic studies. The latter must seek to highlight realistic policy choices on armed intervention in cities and to offer rules of engagement and operational solutions aimed at reducing violence and restricting casualties across a range of urban contingencies. Investment in a metropolitan form of strategic studies holds out the promise that, as a science of cities emerges and unfolds throughout the new millennium, Western militaries will become better prepared to confront the challenges of future conflict in an urban-dominated world.

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66   Small Arms Survey, above note 53, p. 188.

The impact of explosive weapons on urban services: Direct and reverberating effects across space and time

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Abstract

This article reviews the factors that determine the impact of explosive weapons on urban services in space and time, with a focus on drinking water services. The evidence comes from published and unpublished research and records, as well as experience restoring or maintaining such services. Urban services are seen as interconnected, and each composed of interdependent components of people, consumables and hardware. Elements that make up the components are labelled "upstream", "midstream" and "downstream", to reflect their location and hierarchy

in the production and delivery of any urban service. The impact of explosive weapons is broken into the direct effects on any of the components of a service, and the reverberating effects on up- and or downstream components of the same service, or on other services. The effects are most commonly observed in service infrastructure, and determined chiefly by the extent of the damage to the functionality of any component. The spatial extent of the impact is found to be determined primarily by the hierarchy of the component suffering the direct impact, with attacks on upstream components being the furthest-reaching. The duration of the impact is determined primarily by the pre-explosion "baseline resilience" of the service, itself a function of system redundancies and emergency preparedness and response. The analysis suggests that the impact is more reasonably foreseeable than may commonly be thought, in the sense that the direct effects of explosives are well known and that the most important infrastructure is generally identifiable. It follows that proportionality assessments which involve urban services would benefit from (i) the direct and consistent engagement of specialized engineers within the targeting cell, and (ii) greater familiarity of the weapons controller with services, infrastructure and systems in urban areas.

Keywords: urban services, reverberating effects, explosive weapons, reasonably foreseeable, water and conflict, water and war, critical infrastructure, service system.

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The merits of an "urban services" perspective

Contention about the use of explosive weapons in populated areas is usually centred on law and ethics, rather than infrastructure, and the basis for the expanded or constricted use of explosive weapons tends to be laid more by lawyers, social scientists and military planners than by engineers. Yet, as this analysis of the factors that determine the spatial and temporal impact of explosive weapons on urban services shows, a grounded technical awareness adds considerable substance to the discussions and debate surrounding this issue.

The analysis builds upon the growing body of research that explores the impact of explosive weapons upon people and structures, notably the work circumscribing the legal parameters for the use of explosive weapons in populated areas,[1] "forensic

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1   See Maya Brehm and John Borrie, *Explosive Weapons: Framing the Problem*, Background Paper No. 1, Discourse on Explosive Weapons project, UN Institute for Disarmament Research (UNIDIR), April 2010; Laurent Gisel, "The Use of Explosive Weapons in Densely Populated Areas and the Prohibition of Indiscriminate Attacks", in Edoardo Greppi with Gian Luca Beruto (eds), *Conduct of Hostilities: The Practice, the Law and the Future*, 37th Round Table on Current Issues of International Humanitarian Law, San Remo, 4–6 September 2014, International Institute of Humanitarian Law, 2015. See also Isabel Robinson and Ellen Nohle, "Proportionality and Precautions in Attack: The Reverberating Effects of Using Explosive Weapons in Populated Areas", in this issue of the *Review*.

architecture"-type studies,[2] epidemiological studies,[3] operational resilience and systems thinking,[4] and disaster risk reduction.[5]

In the analysis, the nature and extent of the impact of all forms of explosive weapons (not just those "with wide-area effects") on urban services is queried across space and over time. With a focus on drinking water services, that impact is understood in terms of direct effects and reverberating effects. Though explosive weapons may impact any of the components necessary for the functioning of a service (i.e., people, consumables or hardware), their impact is most commonly observed in service *infrastructure*, and is determined chiefly by the extent of the damage to the functionality of any component. The analysis finds that the spatial extent of the impact on urban services is found to be determined chiefly by the position of the damaged component within the hierarchy of the service, with attacks on so-called upstream components (i.e., those which produce the action or commodity that the service provides) typically having the most widespread impact. The duration of the impact is determined primarily by the "baseline resilience" of the service prior to the explosion, which is a function of the nature of system redundancies and capacity for emergency preparedness and response. These findings feed directly into the debates about the implications of such attacks for the rules on proportionality and precaution in attack,[6] by shedding light on what impact on urban services can be considered "reasonably" foreseeable.

Methodology

The analysis is based on public and confidential records, and experience in restoring or maintaining service provision. In particular, the research draws on the prolonged experience of the International Committee of the Red Cross (ICRC) in providing support to municipal service providers and utilities in Gaza, Iraq and Syria. The analysis also builds directly on the ICRC report *Urban Services during Protracted Armed Conflict* (ICRC Urban Services Report),[7] as well as discussions stimulated

2   See Human Rights Watch (HRW), *Precisely Wrong: Gaza Civilians Killed by Israeli Drone-Launched Missiles*, New York, 2009; HRW, *Off Target: The Conduct of the War and Civilian Casualties in Iraq*, New York, 2003; Eyal Weizman, *The Least of All Possible Evils*, Verso, London, 2011; Action on Armed Violence (AOAV), *Explosive Events: Monitoring Explosive Violence in 2013*, London, 2013. For deeper discussion, refer to the interview with Eyal Weizman in this issue of the *Review*.

3   E.g. Deberati Guha-Sapir *et al.*, "Civilian Deaths from Weapons Used in the Syrian Conflict", *BMJ*, Vol. 315, 2015; Deberati Guha-Sapir and Willem G. van Panhuis, *Armed Conflict and Public Health: A Report on Knowledge and Knowledge Gaps*, WHO Collaborating Centre for Research on the Epidemiology of Disasters, Catholic University of Louvain, Brussels, 2002; Brian Rappert, Richard Moyes and Iain Lang, "The Case for Addressing Explosive Weapons: Conflict, Violence and Health", *Social Science & Medicine*, Vol. 75, No. 11, 2012.

4   A. H. Hay, *Operational Survival: Putting Resilience at the Core of Infrastructure Planning*, Explora Research, London, 2013.

5   Federal Emergency Management Agency (FEMA), *Reference Manual to Mitigate Potential Terrorist Attacks Against Buildings*, FEMA 426, Risk Management Series, US Department of Homeland Security, Washington, DC, 2003. Also see the Q&A with Evaristo de Pinho Oliveira in this issue of the *Review*.

6   See I. Robinson and E. Nohle, above note 1; see also L. Gisel, above note 1.

7   ICRC, *Urban Services during Protracted Armed Conflict: A Call for a Better Approach to Assisting Affected People*, Geneva, 2015 (ICRC Urban Services Report).

by the authors at the ICRC Expert Meeting on Explosive Weapons in Populated Areas (EWPA),[8] the 16th Bruges Colloquium on International Humanitarian Law[9] and the 32nd International Conference of the Red Cross and the Red Crescent side event on EWPA.[10]

Features of urban services

This section lays the technical foundation of urban services required to assess the factors which determine the impact that explosive weapons have upon them.

Components of urban services

The term "service" is used here to mean the provision of commodities, actions or other items of value to an urban population, and could include electricity, health care, water, waste-water collection and treatment, and solid waste disposal.[11] Urban services are increasingly complex systems, and the general public's limited knowledge of their internal workings is contrasted by its near-total dependence upon them.

Most urban services are dependent upon each other. For example, a damaged electrical transformer can cut the power to a water booster pumping station, and so disrupt the water supply to an entire neighbourhood and/or to the local hospital. Furthermore, each urban service requires three components in order to function: people (e.g. service provider staff, private sector contractors and entrepreneurs), consumables (e.g. fuel, chlorine, medicines), and hardware (e.g. equipment, heavy machinery, infrastructure). The bulk of the focus of this article is on the infrastructure element of the hardware component in relation to its function and position within the broader system of any given service.

Each component of a service affects the others. For example, even with well-maintained water infrastructure, experienced water utility staff cannot provide water to consumers if there is no power to run the booster pumps that maintain the pressure in the distribution network.

"Upstream" and "downstream" components

There is a hierarchy of importance within the components of a service, as some elements of each component are more important for the effective functioning

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8   See ICRC, *Explosive Weapons in Populated Areas: Humanitarian, Legal, Technical, and Military Aspects*, Report of the ICRC Expert Meeting in Chavannes-de-Bogis, Switzerland, 24–25 February 2015, Geneva, 2015.

9   See ICRC, *Urban Warfare: Proceedings of the Bruges Colloquium*, 16th Bruges Colloquium, 15–16 October 2015, Geneva, 2016.

10   ICRC, "The Use of Explosive Weapons in Populated Areas and the Need to Better Protect Civilians", side event held in Geneva, 9 December 2015.

11   The list of other "basic services", such as radio and television, ports, banking, education, roads and telecommunications, is potentially non-exhaustive. It is likely to change with each context.
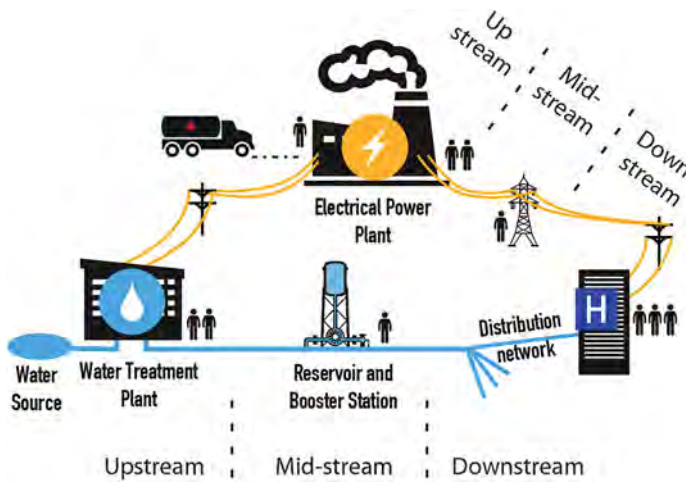
Figure 1. Sketch showing the hierarchy of components within water and electricity services.

of the service, particularly for infrastructure. Infrastructure that is disabled at the supply end of an infrastructure system is more disruptive to more people than are elements of infrastructure that deliver the product halfway down the line, or to the end user, for example. At the top of this hierarchy is what are referred to here as "upstream" components, as shown in Figure 1. Upstream components produce the items of value that the service delivers (typically a commodity or an action), such as water treatment plants, waste-water treatment plants or electrical power plants. "Midstream" components are those that are necessary for the storage or delivery (but not production) of the bulk of the commodity, action or other items of value, such as water reservoirs and booster pumping stations, or an on-grid electrical substation and transmission lines. "Downstream" components of any service are those that ensure the storage or delivery to the end users of the service, such as a water distribution network or an electrical transformer. The significance of the distinction is related to scale; upstream components of a service (read: elements of infrastructure) provide for the largest coverage area and hence the greatest number of people served, while downstream components provide for a smaller coverage area and hence fewer people served.

The hierarchy of importance of components also holds true for the people and consumable components of a service, if to a lesser degree. For a drinking water service, so-called upstream people include the key operations personnel required for a service to run, while maintenance, planning and administrative staff can be considered key midstream people, and consumers downstream. In terms of consumables, fuel to run the water treatment plant is considered upstream, while treatment chemicals (such as chlorine for dosing at booster pumping stations) are a midstream consumable, and fuel or chlorine tablets for household treatment are downstream consumables.

Baseline resilience

The condition of a service prior to an attack is also a consideration, as existing underlying vulnerabilities can in some cases be greatly exacerbated by an attack. An impoverished and poorly governed service provider (e.g. Basrah in 2004) can be expected to have fewer options than a well-governed and financially secure one (e.g. Geneva in 2016), in short because the latter is more resilient.

"Service resilience"[12] may be measured in terms of redundancies (replication of elements of infrastructure, substitute staff) and level of preparedness or ability to respond (e.g. number of qualified staff, volume of prepositioned stocks of consumables, quality of infrastructure).[13] Of the two, the ability to respond may be the more important measure, as it captures the combined ability to make the best use of built-in redundancies while ensuring that viable alternatives act as a capability for restoring the service. To return to the previous example, Geneva's current drinking water service is considered more resilient than that of Basrah in 2004, in both qualitative and quantitative terms. Each has redundancies designed and built into it (and the Basrah service may have developed more of these redundancies while coping with the effect of armed conflict and sanctions),[14] but the former is likely to have a larger and more reliable supply of stocks, well-operated and well-maintained infrastructure, and systems to support the personnel responsible for implementing emergency preparedness plans.

Factors that determine the impact of explosive weapons on urban services

This section establishes the factors that determine the extent of the impact of the use of explosive weapons on urban services in space and over time. "Explosive weapons" is understood here to mean weapons that use high explosives to project a blast wave, fragmentation or thermal energy from a point of detonation.[15] Types of explosive weapons include artillery shells, missiles, rockets and improvised explosive devices.

Direct and reverberating effects

The ICRC Urban Services Report stressed how the direct and indirect impacts of protracted armed conflict and trade sanctions accumulate over time. Such impacts accumulate as repeated bouts of violence within the protracted conflict

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12 "Service resilience" is used here in a way that is analogous to "operational resilience", which is defined as "that essential ability of an operation to respond to and absorb the effects of shocks and stresses and to recover as rapidly as possible normal capacity and efficiency". A. H. Hay, *After the Flood: Exploring Operational Resilience*, FriesenPress, Victoria, 2016.

13 Jean Philippe Dross *et al.*, "Urban Services in Protracted Armed Conflict", *Crisis Response Journal*, Vol. 11, No. 3, 2016. Also see the Q&A with Evaristo de Pinho Oliveira in this issue of the *Review*.

14 *Ibid.*

15 Borrowing from Maya Brehm and John Borrie, *Explosive Weapons: Framing the Problem*, Background Paper No. 1, Discourse on Explosive Weapons project, UNIDIR, Geneva, 2010; and AOAV, above note 2.
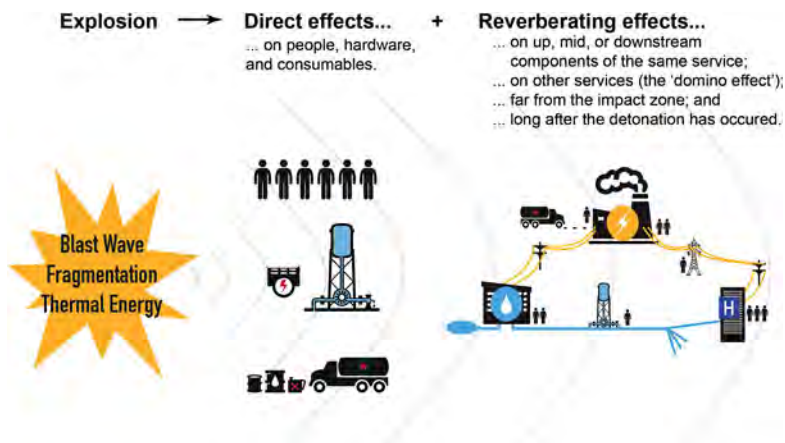
Figure 2. Depiction of the direct and reverberating effects of the detonation of an explosive weapon on the components of an urban service.

degrade the service (whether its people, hardware or consumables) to a point where its restoration is no longer economically feasible under the prevailing conditions, if possible at all. This section adapts this approach in order to examine in particular the impact of explosive weapons on urban services, with "impact" understood in terms of both direct and reverberating effects.

As shown in Figure 2, the impact of the detonation of explosive weapons on urban services is gauged in terms of direct and reverberating effects. *Direct effects* of explosive weapons on urban services refers here to the immediate and physical impact caused by the explosion. Examples include the death or injury of operations and maintenance crews, damage to a water reservoir, or damage to a warehouse of spare parts and consumables. The direct effect of the explosion can have consequences on other components of the same service when they are interdependent. *Reverberating effects* of explosive weapons on urban services refers to such consequences, as discussed further below.

The consequences of explosive weapons can feed into the vicious cycles and other dynamics (e.g. trade sanctions, brain drain) of the indirect and cumulative impact of protracted armed conflict upon urban services, whether on the whole system of the same service, or on other services. An increased spread of communicable disease due to disrupted water supply is just one example,[16] though this is possible even in more acute conflicts. More immediate and generally less enduring are the reverberating effects on the urban services themselves. While the consequences of the use of explosive weapons in general "are not limited to

16   Paul R. Hunter, Denis Zmirou-Navier and Philippe Hartemann, "Estimating the Impact on Health of Poor Reliability of Drinking Water Interventions in Developing Countries", *Science of the Total Environment*, Vol. 407, No. 8, 2009; Paul R. Hunter, Alan M. MacDonald and Richard C. Carter, "Water Supply and Health", *PLOS ONE*, Vol. 7, No. 11, 2010.

death, physical injury and disability, but also include long-term impacts on mental well-being",[17] the reverberating effects of explosive weapons on urban services are relatively bounded in space and over time. More specifically, the reverberating effects of explosive weapons on urban services are limited by the extent of the damage to upstream and midstream infrastructure, by the spatial distribution of the reverberations, and by the time required to restore the service.[18]

The reverberating effects of explosive weapons on urban services also vary with each particular component of a service. The reverberating effects on an *infrastructure* system[19] can be seen upstream, as when damage to a public water reservoir renders the transmission line and water treatment plant upstream useless, or downstream, as when damage to a domestic water reservoir eliminates the storage capacity and hence the supply of water to an entire neighbourhood. The maximum theoretical spatial extent of the reverberating effects is thus limited to the breadth of the service area (for example, the physical footprint of the service infrastructure).[20] The duration of the reverberating effects varies: for example, the buffer and storage function of a downstream water reservoir (i.e., one that serves an entire neighbourhood) can in some cases be restored to a limited degree by the installation within hours or days of temporary water tanks, or it can be repaired to full functionality within weeks.[21] In other cases, such as when the water reservoir cannot be repaired and its storage function cannot be bandaged with "quick fixes", the continuity of the supply and pressure in the line is interrupted, leading to undue stress on distribution pipes further downstream and resulting in a less reliable service for the end user. And the restoration of a booster pumping station can take several months or even over a year, particularly if the pumps and electrical panels need to be imported.[22]

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17 ICRC, "Explosive Weapons in Populated Areas", fact sheet, Geneva, February 2016.

18 What are referred to here as reverberating effects of explosive weapons *on urban services* are a subset of the "foreseeable reverberating effects of an attack" *in the general sense* as discussed in the article by Robinson and Nohle in this issue of the *Review*, which are "otherwise known as 'knock-on effects', 'indirect effects' or 'long-term consequences'". Reverberating effects on *infrastructure* are similar to what Christina Patterson calls 'first order ripple effects' in her discussion on the impact of urban infrastructure disruptions on military operations and non-combatants. Christina M. Patterson, *Lights Out and Gridlock: The Impact of Urban Infrastructure Disruptions on Military Operations and Non-Combatants*, No. IDA/HQ-D-2511, Institute for Defense Analyses, Alexandria, VA, 2000.

19 By "infrastructure system", we mean the network of elements that make up all of the infrastructure required within a system to deliver the service (bearing in mind that "infrastructure" is just one element of the "hardware" component of a service).

20 This could extend to peri-urban areas that are supplied through water tankers filling from a point on the main transmission line.

21 Pier Giorgio Nembrini *et al., Basrah Water Supply during the War on Iraq*, ICRC, Geneva, 2003. See also Organization for Security and Co-operation in Europe, *Access to Water in Conflict-Affected Areas of Donetsk and Luhansk Regions*, Special Monitoring Mission to Ukraine, 2015.

22 François Grünewald and Eric Levron (eds), *Villes en guerre et guerres en villes*, Editions Karthala, Paris, 2004; Stephan Magnaldi and Jessica Patera, "Kaboul, de la destruction à la reconstruction", in *ibid.*; François Grünewald (ed.), *Working in Syrian Cities at War: Humanitarian Aid under Constraints*, Les Dossiers de Grotius International, 2013.

The *people* and *consumables* so important to the effective functioning of an urban service also suffer from explosive weapons, of course. Whether an explosive weapon were to completely destroy the sole warehouse of spare parts and consumables, or kill or maim a large number of the municipal staff, the spatial extent and duration of the reverberating effects would likely be similar to those observed in infrastructure. Cases where the effects of the use of explosive weapons will reverberate upstream or downstream on people or consumables are relatively few, however, and the consequences are generally more contained both in space and over time. For instance, if a warehouse full of spare parts has been destroyed, the reverberating effects on the system will be felt in space at the related infrastructural points that have broken down or failed, whereas the impact over time is a function of the time required to procure and install the replacement parts (as well as the replacement spare parts required to retain the pre-explosion level of preparedness).

Furthermore, the damage caused by explosive weapons on any component of a service can have a "domino effect" on other services.[23] Damage to an electrical substation can halt the municipal drinking water supply, and this "toppling" type of reverberating effects can lead to loss of sterilization capacity in the operating theatre,[24] as just one example.

The potential reverberating effects of explosive weapons on infrastructure at different levels of the hierarchy of service components are presented in Table 1. Consider as a hypothetical example the reverberating effects of a direct strike on an upstream water treatment plant that damages three of six of the main transmission pumps. If the plant was normally operated with four pumps, with the other two remaining reserved for scheduled switchover, the maximum volume of water that could be supplied to residents after the attack would be three quarters of the normal amount. Depending on the configuration of the drinking water distribution network (i.e., whether closed-loop, meaning a more effective circulation of water, or open-ended, which has much more vulnerable sections), this could result in one quarter of the users near the end of the distribution network receiving less water than normal, as well as silting in the unused distribution (and possibly also transmission) pipelines. There would also be the reverberating effect of an undue amount of wear on those pumps that still function. These pumps would be likely to fail earlier than they normally would have, thus threatening the entire drinking water service. Similar cases have been documented for Beirut,[25] Baghdad,[26]

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23 ICRC, above note 8. The "domino effect" may be analogous to what Schmitt and Widmar refer to as a "knock-on" effect. Michael N. Schmitt and Eric W. Widmar, "On Target: Precision and Balance in the Contemporary Law of Targeting", *Journal of National Security Law and Policy*, Vol. 7, No. 3, 2014.

24 Christos Giannou and Marco Baldan, *War Surgery: Working with Limited Resources in Armed Conflict and Other Situations of Violence*, Vol. 1, ICRC, Geneva, 2009.

25 Pier Giorgio Nembrini, "Lebanon: Water Supply Problems during the 1989 and 1990 Wars", in ICRC, *Water and War: Symposium on Water in Armed Conflict, Montreux, 21–23 November 1994*, Geneva, 1994.

26 Yves Etienne and Pier Giorgio Nembrini, "Establishing Water and Sanitation Programmes in Conflict Situations: The Case of Iraq during the Gulf War", *International Journal of Public Health*, Vol. 40, No. 1, 1995.

Table 1. *Examples of the direct effects, reverberating effects and consequences of explosive weapons on up-, mid- and downstream elements of a drinking water infrastructure system, and indication of their magnitude in space and in time*

	Upstream components (e.g. water treatment or electrical power plants)	Midstream components (e.g. water reservoirs, booster pumping stations, transmission lines or on-grid substations)	Downstream components (e.g. distribution networks or distribution transformers)
Relative magnitude of expected impact	High	Medium	Low
Direct effects	Destruction of or damage to a water treatment plant.	Destruction of or damage to a water reservoir serving multiple neighbourhoods or a district within a city.	Destruction of or damage to a residential distribution network, or a household connection to the network.
Potential reverberating effects	Disruption of treatment of unprocessed water; disruption of transmission of treated water and local distribution to the end user.	Disruption of the pattern of water supply (i.e., continuity of supply (reliability), pumping hours, quantity of water, and pressure) to a neighbourhood or neighbourhoods. Upstream, silting of transmission line; downstream, silting of distribution network, contamination of hospital water reservoir and/or inadequate supply.	Disruption of the pattern of water supply (i.e., continuity of supply (reliability), pumping hours, quantity of water, and pressure) to individual buildings (e.g. house, block of flats, factory).
Consequences on the drinking water infrastructure system	Lower volume and quality of water supplied to the entire service area (typically city-wide or several neighbourhoods).	Halted or very poor quality of water supplied to the neighbourhood. Reduced continuity in supply.	Halted or very poor quality of water supplied to affected households.
Physical extent of direct and reverberating effects	Open to entire extent of service (potentially confineable in resilient systems with alternative production options).	Open to affected portion of service.	Confined to the localized service area or household level.
Duration of direct and reverberating effects	Immediate, short-, medium- or long-term (seconds to months to years, depending on the extent of the damage, whether the infrastructure damaged is up-, mid- or downstream, and baseline service resilience).		

Grozny,[27] Huambo,[28] Kabul,[29] Jenin,[30] Gaza,[31] southern Lebanon[32] and other places.

In this example, the cumulative impact of the partial damage to the pumps is an entire breakdown of the drinking water service, the result of direct and reverberating effects, and is likely to have a domino effect on other services (e.g. health). The extent to which such impact will be considered reasonably foreseeable is a function of a number of factors that will be discussed below.

Consideration of the reverberating effects of a strike affecting a downstream component of a service demonstrates the importance of incorporating the hierarchy of components of any service into the analysis. Particularly when alternative water supplies are of poor quality or risky to access, the (downstream) household connection to the network is a crucial component for the well-being, health and dignity of all of the household's members. The consequences for a family when its connection is damaged by an explosion can be devastating, in terms of dignity, public health or displacement. From a services perspective, however, the damage is of relatively less consequence than the disabling of a domestic water reservoir, or other midstream or upstream components.[33]

Baseline resilience

The deaths of hundreds of doctors in Iraq and Syria[34] have demonstrated how the direct effect of explosive weapons on the people on which a service depends can have reverberating effects (on that service). In situations of protracted conflict, the direct effect of explosive weapons can be expected to reverberate more pervasively than in conflicts of a short duration, because of their eventual contribution to cumulative

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27 Robert Hodgson and Alain Oppliger, "After the Battle of Grozny", in ICRC, *War and Water*, Geneva, 1999.

28 Pier Giorgio Nembrini, *Huambo (Angola): Water Supply in a War Torn Town – Evolution and Impact of the Different Interventions since 1985*, Occasional Paper No. 3, Cities in War: Thirsty Cities, Geneva Foundation, Geneva, 2001.

29 Jean-François Pinera, *Cities, Water and War: Looking at How Water Utilities and Aid Agencies Collaborate in Cities Affected by Armed Conflicts*, Lambert Academic Publishing, Loughborough, 2011.

30 Mark Zeitoun, "Conflict and Water in Palestine: The Consequences of Armed Conflict on Drinking-Water Systems in Jenin, West Bank", in Imad Khatib *et al.* (eds), *Water: Values and Rights*, Palestine Academy Press, Ramallah, 2005.

31 Pier Giorgio Nembrini and A. Moreau, *The Gaza Strip: The Last "Ghetto": An Organized Deprivation and a Denied Urban Development*, Occasional Paper No. 9, Cities in War: Thirsty Cities, Geneva Foundation, Geneva, 2009.

32 Mark Zeitoun, Karim Eid-Sabbagh and Jeremy Loveless, "The Analytical Framework of Water and Armed Conflict: A Focus on the 2006 Summer War between Israel and Lebanon", *Disasters*, Vol. 38, No. 1, 2014.

33 Notwithstanding the risk of spread of infectious disease from even one household deprived of sufficient safe water. Paul R. Hunter, Denis Zmirou-Navier and Philippe Hartemann, "Estimating the Impact on Health of Poor Reliability of Drinking Water Interventions in Developing Countries", *Science of the Total Environment*, Vol. 407, No. 8, 2009; Jamie Bartram and Paul Hunter, "Bradley Classification of Disease Transmission Routes for Water-Related Hazards", in Jamie Bartram *et al.* (eds), *Routledge Handbook of Water and Health*, Routledge, London, 2015. This sort of "impact" can be very long-term, even indefinite.

34 Physicians for Human Rights, *Anatomy of a Crisis: A Map of Attacks on Health Care in Syria (Findings as of February 2016)*, New York, 2016; Gilbert M. Burnham, Riyadh Lafta, Shannon Doocy, "Doctors Leaving 12 Tertiary Hospitals in Iraq, 2004–2007", *Social Science & Medicine*, Vol. 69, No. 2, 2009.

impact induced over time by the repeated interplay of direct and indirect impacts. A singular attack on any part of a service in a city that has no ongoing armed conflict (say, again, Geneva) is not likely to induce the same extent of brain drain as would repeated attacks in a city living through protracted conflict (as currently seen in Aleppo, for example), because the ability to adapt of those involved has not been repeatedly tested.[35]

This example demonstrates how the reverberating effects of explosive weapons on urban services can be dampened or amplified by the resilience of the service prior to the explosion – what is referred to here as *baseline service resilience*. From a perspective of the rules of proportionality and precaution in attack, this baseline service resilience would form part of what Robinson and Nohle call the "contextual factors".[36]

As previously discussed, service resilience may be measured in terms of redundancies and the level of emergency preparedness and ability to respond. A drinking water system that has diversified water sources (or multiple water reservoirs that are pre-designed for operational flexibility with the same service areas within an urban area) is resilient because each replication subdivides the service, and so limits the physical extent of, and number of people affected by, any damage.[37] The subdivisions also allow for quicker repair work, as parts of transmission and distribution networks can be isolated without disrupting the entire service area. Furthermore, this type of systems design allows for relatively quick modifications (i.e., reconfiguration of part of the system) to restore service delivery.

The "preparedness and response" measure of a service may be thought of as the ability and time required to restore a service after receiving a direct impact and/ or the immediate reverberating effects of an explosion. Especially if the impact occurs at the beginning of hostilities or in a situation of limited armed conflict, consumables lost to the violence (like chlorine stocks) may be replaced, and problems with damaged infrastructure can be worked around through temporary measures (such as water trucking), or soon repaired (e.g. a patch welded to a steel reservoir pierced by a single tank shell). The absence of a small number of staff in the short term can be handled relatively easily through replacement staff, such that the service keeps running.

The ability of local authorities or relief providers to respond to the direct or reverberating effects of explosive weapons is itself a question of both the scale of the damage and the state of the service prior to the explosion. For example, the total destruction of a water reservoir obliges the temporary installation of a temporary water tank to maintain storage capacity, but this will be a fraction of the original

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35 REACH, *Eastern Aleppo Household Assessment: Water Security*, ACTED and IMPACT Initiatives, UN Operational Satellite Applications Programme, Geneva, August 2015.

36 See I. Robinson and E. Nohle, above note 1.

37 Paolo Bocchini, Dan M. Frangopol, Thomas Ummenhofer and Tim Zinke, "Resilience and Sustainability of Civil Infrastructure: Toward a Unified Approach", *Journal of Infrastructure Systems*, Vol. 20, No. 2, 2014.

capacity, at best.[38] The partial destruction of a water booster pumping station is typically more difficult to work around, repair or replace than a reservoir, meaning that considerably more time is likely necessary to restore the service. Because the technologically sophisticated equipment is not readily repairable on-site (or sometimes in-country), it is not uncommon that it must be shipped out for repair to special machine shops or even to the original manufacturer, which is both expensive and logistically difficult.[39] This is particularly the case if the quality of local production is poor or stocks have been depleted during the protracted conflict. In Iraq, for example, chlorine tablets were used instead of the chlorine gas that water treatment plants were designed to operate with,[40] meaning there is no assurance that the water was treated to a safe level. The baseline resilience of a service in protracted conflicts is constantly changing (improving after repairs, but generally degrading over time), and is thus – for the purposes of this analysis – a factor that to the extent possible should be considered prior to an attack.

Impact in space and over time

By definition, the direct impact of explosive weapons on urban services is confined to the physical "impact area" of the explosive being considered. The impact area varies considerably with the type of explosive weapon used, but is defined as the distance over which the initial blast wave creates pressure,[41] as well as the distance of any fragmentation delivered, and the dissipation of thermal energy. The blast wave dissipates within milliseconds, while the fragmentation and thermal energy dissipates typically within seconds. For example, explosive weapons with wide-area effects like the surface-to-surface Scud missile or an Mk-84 bomb can damage a water reservoir, a warehouse for spare parts and a water supply operator within a target area of hundreds of square metres, simultaneously.

As shown in Table 2, the extent of the reverberating effects of explosive weapons on urban services changes in space and time depending on the pre-attack baseline resilience of the service. To recall – for a service that is quite resilient prior to an attack, the reverberating effects of explosive weapons are expected to be dampened because the service's redundancies can provide alternative supply options and/or routes, and the spare parts and people required to install them are still available. By contrast, the reverberating effects of explosive weapons on a service that has low baseline resilience prior to the attack – that is to say, one that is already "on its knees" – can extend much further afield and forward in time.

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38 "Downstream" reservoirs that supply small neighbourhoods have a capacity of about 500 cubic metres, for example, while those placed more "upstream" to serve 250,000 people have up to 5,000 cubic metres (as with the al Montar reservoir in Gaza). Most rapid-deployment tanks are limited to 95 cubic metres, though some can be 200 or 500 cubic metres.

39 J.-F. Pinera, above note 29.

40 CARE International, *Watsan Project Report: September 1997*, internal communication by CARE International classified as ICRC File No. 022, 1997.

41 FEMA, above note 5.

Table 2. *Summary of the factors that determine the extent of the impact of explosive weapons in space and time, according to different scenarios of baseline resilience*

Baseline resilience		Hierarchy	Reverberating effects		
Redundancies	Preparedness/ capacity to respond	Hierarchy of explosion (in the service)	Impression in space Confined or Open	Impression in time 1 = Immediate 2 = Short-term 3 = Mid-term 4 = Long-term	Magnitude (relative number of people affected) Low, Med, High
High	High	Downstream	Confined	1	L
High	High	Midstream	Confined	2	M
High	**High**	**Upstream**	**Open**	**2**	**H**
High	Med	Downstream	Confined	3	L
High	Med	Midstream	Confined	3	M
High	**Med**	**Upstream**	**Open**	**3**	**H**
High	Low	Downstream	Confined	4	L
High	Low	Midstream	Confined	4	M
High	**Low**	**Upstream**	**Open**	**4**	**H**
Medium	High	Downstream	Confined	1	L
Medium	High	Midstream	Confined	1	M
Medium	**High**	**Upstream**	**Open**	**1**	**H**
Medium	Low	Downstream	Confined	3	L
Medium	Low	Midstream	Confined	3	M
Medium	**Low**	**Upstream**	**Open**	**3**	**H**
Low	Low	Downstream	Confined	4	L
Low	**Low**	**Midstream**	**Confined**	**4**	**M–H**
Low	**Low**	**Upstream**	**Open**	**4**	**H**

The magnitude, delivery method and contact area of the explosive are assumed constant in each scenario. Entries in bold are those with the highest magnitude in terms of the relative number of people affected.

Investigating the determinants of the impact of the reverberating effects of explosive weapons on urban services thus obliges tackling several sets of variables: the three components of each service; the interdependencies of services; direct effects; reverberating effects; and the up-, mid- and downstream hierarchy. Table 2 clarifies the dynamics through a systematic summation of alternatives of the different sets of variables in different scenarios. The summary reveals the extent to which the baseline conditions and hierarchy influence the expected impact of the explosive weapons in space and time.

A close reading of Table 2 reveals a number of relevant dynamics. The first is that the greatest impacts (i.e., those scenarios classed as "Open" in the space column, and graded "3" or "4" in the time column) occur where the explosive weapon is used on an upstream part of a service that is low both in terms of quality and in capacity to respond. This confirms conventional thought on the subject – i.e., that the attacks which are the most likely to cause direct or reverberating effects over the largest area and for a prolonged period of time are those on the supply-end (i.e., upstream) infrastructure, especially if this is already degraded.

Secondly, the expected impact of explosive weapons *across space* is found to be shaped primarily by the hierarchy of the component within a service. That is, the spatial extent of the reverberating effects of explosive weapons on downstream elements of an infrastructure system can be expected to be "confined" (typically to a localized neighbourhood or even household level). The reverberating effects of explosive weapons on upstream elements of a service are more open – limited only by the extent of the infrastructure of the network, which often spans dozens of kilometres and can serve upwards of hundreds of thousands of people.

Thirdly, the expected impact of explosive weapons on urban services *in time* is found to be determined primarily by the baseline resilience of the service. That is, the reverberating effects upon any component of a service (whether people, hardware or consumables, or located up-, mid- or downstream) are likely to be shorter when the pre-attack quality of the service and its ability to respond are high. Reverberating effects of explosive weapons on the service are expected to last much longer when the baseline conditions of the service are poor; generally, a service that is already vulnerable is more likely to be disrupted for a longer period than one that is robust. The reverberating effects can span from days to decades, and are distinct from other reverberating effects (e.g. on public health or markets), which might not be similarly bound in time).

There is also considerable differentiation in the impact on time within each scenario. For services of the same baseline quality, for example, the magnitude of the reverberating effects varies directly with the ability to respond. Likewise, in situations of equal ability to respond, the magnitude of the reverberating effects varies directly with the quality of service.

Implications for proportionality and precaution in attack

The analysis has demonstrated how the impact of explosive weapons on any component of a service can be direct and reverberate within the same service or

other services. The duration and spatial extent of the direct and reverberating effects depend primarily on the extent of the damage to the functionality of a service component. The overall impact across space varies significantly, being determined primarily by the hierarchy of the component suffering the direct effect (damage on upstream components typically having the most widespread impact). The duration of the overall impact is determined mainly by the pre-explosion operational resilience of the service, as measured in terms of system redundancies and emergency preparedness and response. More specifically, and in the majority of cases seen, the greatest impact of explosive weapons on urban services is a function of the extent of the damage to upstream or midstream infrastructure (i. e., that which produces or delivers the bulk of the service), the nature and extent of the reverberations downstream of the elements of any service component, the "domino effect" onto other services, and the time required to restore the service.

The findings hold a number of implications for the rules on proportionality and precaution in attack, as they shed light on what impact on urban services can be "reasonably foreseeable". As Robinson and Nohle discuss, the rules oblige attackers "to take into account the expected incidental loss of civilian life, injury to civilians or damage to civilian objects arising from a particular attack", which the ICRC interprets to include the foreseeable reverberating effects of an attack.[42] The relevant question when carrying out a proportionality assessment for an attack on a military objective expected to cause damage to a service is: to what extent are the direct impact and reverberating effects reasonably foreseeable?

The analysis has emphasized that service hardware is the chief component of concern regarding the use of explosive weapons, and that upstream and midstream infrastructure have primacy within that particular service component. A number of features of such primary service hardware should be considered. First, the detailed layout of the service system is often only known by the staff of the service provider that operates the service (typically at the municipal level), even if the original layout is sometimes recorded in as-built plans or standard operating procedures. Regardless of whether an attack is planned with the luxury of time or a result of dynamic targeting (i.e., time-sensitive), access to this level of information is not likely to be readily available. However, in some circumstances, with time and experience a greater level of information and knowledge will have been acquired (e.g. in protracted conflict, or during periods of prolonged occupation), and hence could be expected to inform any proportionality assessment.[43] Given the fact that "collateral damage" is assessed, this analysis suggests that resource personnel can and should be used wherever possible to gain knowledge of the basic layout and functioning of the service. In the absence of such information, the alternative is to rely on the expert opinion of engineers specialized in a particular urban service (i.e., water supply, waste-water collection and treatment, or power supply).

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42 See I. Robinson and E. Nohle, above note 1.
43 Which could include, but is not limited to, a collateral damage estimation.

Second, it happens that most of this upstream and midstream infrastructure is identifiable, in that it is typically located at ground level and takes on familiar spatial or design patterns. For example, the clarifying tanks emblematic of water treatment plants are readily distinguishable as being circular and about 3–15 metres in diameter. They are also quite distinct from conventional electrical power plants or conventional waste-water treatment plants. Secondary booster pumping stations and ground-level and elevated water reservoirs are clearly distinguishable if not covered, and so also discernible to a trained eye. If such infrastructure is identifiable from the air (or from the ground when in the line of sight), it follows that a weapons controller could be trained to distinguish it from other parts of an urban landscape.

Third, there is considerable specialist knowledge of the direct effects of the use of explosive weapons on urban services, at least on infrastructure. This lies with militaries,[44] local authorities[45] and some humanitarian organizations.[46] In terms of both physical protection of infrastructure and preparedness for a particular event, it is also documented in internal or open-source publications.[47]

Given these three characteristics, even without access to the as-built plans of infrastructure, much of the impact caused by explosive weapons upon urban services is reasonably foreseeable. This statement holds true whether the weapons have "wide-area effects" or not. However, such reverberating effects are not yet as routinely catalogued (or perhaps even conceptualized) by belligerents, local authorities and relief agencies. Amongst other implications that are to be addressed in separate analysis,[48] then, the findings suggest that the process of carrying out a proportionality assessment which involves urban service infrastructure would benefit from (i) the direct and consistent engagement of specialized engineers within the targeting cell, and (ii) greater familiarity of the weapons controller with services, infrastructure and systems in urban areas (and when possible in theatre). The latter will ensure a greater likelihood of identifying civilian objects (which are static) and associating them with the foreseeable reverberating effects (including those that are immediate and within systems).

The analysis holds two further implications for discussions about rules on proportionality and precaution in attack. It is worth returning to the articulation in footnote 19, above, of reverberating effects on *urban services* as a subset of the "foreseeable reverberating effects of an attack" *in the general sense*, as described

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44 US Army, *Intelligence Support to Urban Operations*, Field Manual FM 2-914, Headquarters, Department of the Army, Washington, DC, 2008; C. M. Patterson, above note 18.

45 For example, the Southern Water Board in Lebanon (in 2006) and the Coastal Municipalities Water Utility in the Gaza Strip.

46 For example, the ICRC.

47 Public Safety Canada, *Risk Management Guide for Critical Infrastructure Sectors*, Version 1.0, Ottawa, 2010; Centre for European Policy Studies (CEPS), *Protecting Critical Infrastructure in the EU*, CEPS Task Force Report, Brussels, 2010; FEMA, above note 5.

48 Including the protection offered by international humanitarian law. Initial discussions are to be found in Mara Tignino, *Water During and After Armed Conflicts: What Protection in International Law?*, Brill, Leiden, 2016; L. Gisel, above note 1.

by Robinson and Nohle.[49] The former are not only generally more bounded in space and over time as this analysis shows, but are also arguably even more easily foreseeable than the latter (which extend, according to the definitions employed here, beyond the reverberating effects on urban services themselves).

Finally, the analysis further contributes to a related debate about the ability to mitigate the impact of explosive weapons on urban services (whether reasonably foreseeable or not). As the ICRC Urban Services Report states, "[a]lthough the rules on the conduct of hostilities do not specifically state that an attacker must take account of the decreased capacity of essential services caused by previous attacks, to the extent that such decreased capacity is foreseeable, it must be taken into account".[50] The analysis has shown that the ability of a system to respond to damage or disruption is one of the key elements of the baseline conditions that determine the extent of the reverberating effects, most notably over time.

49 I. Robinson and E. Nohle, above note 1.
50 ICRC Urban Services Report, above note 7, p. 40.

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Before and after urban warfare: Conflict prevention and transitions in cities

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Abstract

The rising pressures of urbanization in fragile and conflict-affected countries have increased concerns about the vulnerability of cities to armed threats. Changes in the character of armed conflict during the twenty-first century and its effects on cities in the developing world have exposed gaps in the planning and practice of peace and security, which retain a "nation-State bias" that circumvents local perspectives and agencies. Whereas full-scale use of military power in cities remains as destructive today as it has ever been, international organizations such as the United Nations have called for changed approaches to State tactics in urban areas. Mechanisms designed to prevent conflict or to help countries transition back to peace are particularly key if massive human and economic damages are to be avoided in a world of increasingly dense cities. Another key concern is the vulnerability of developing-world cities to low-intensity, if protracted, forms of violence by non-State actors, particularly in post-conflict contexts. Conflict prevention and peace transitions in cities (including mainstream international

tools such as peacekeeping, stability and reconstruction aid) are affected by specifically urban pressures linked to rising populations, migration, ethnic tensions, institutional deterioration and the weakening of urban services. Therefore, the physical and social characteristics of cities interact with military and developmental policies in unique ways. An understanding of key local actors, services and institutions affecting urban drivers of armed conflict – an urban strategic environment – can help practitioners and strategists to craft comprehensive policies.

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Cities have a crucial place in the development path of fragile and conflict-affected States. Metropolitan areas, with their concentration of industrial and service sectors, are important engines for economic growth and productivity in developing countries.[1] However, as urban population growth accelerates in many developing regions, the emerging consensus is that armed violence and conflict tend to increasingly affect these population centres, therefore jeopardizing broader national recovery and development.

The unprecedented pace of global population growth in cities has triggered fears of a potential increase in the frequency of such clashes in densely inhabited areas. This is linked, according to different sources, to increased demographic pressures on urban systems, combined with the attractiveness of such spaces for non-State armed groups. The two risk factors – rapid population growth and armed activity by non-State actors – are key conclusions from strategic studies of urban conflicts. While other factors, such as informational connectivity and State weakness, also play a role, the source of expanding scholarly and humanitarian concerns about urban conflict stems from these two dynamics. For instance, the concept of "hybrid war" was widely discussed during the conflict in eastern Ukraine starting in 2014, consisting of a combination of tactics used simultaneously "by both states and a variety of non-state actors", primarily in cities.[2] And one influential voice from the strategic/military studies field, David Kilcullen, has pointed out that "non-state conflicts (guerrilla, tribal, and civil wars, or armed criminal activity such as banditry and gang warfare) … tend to happen near or within the areas where people live" – i.e., wars are taking place in "increasingly crowded, urban, coastal" areas.[3]

This linkage between urbanization and non-State armed activity is further strengthened by some of the "conflict economies" that have become associated with globalization. In defining "deviant globalization", the US National Defence

1   John M. Quigley, "Urbanization, Agglomeration, and Economic Development", in Michael Spence *et al.* (eds), *Urbanization and Growth*, World Bank, Washington, DC, 2009, p. 128.
2   Frank G. Hoffman, *Conflict in the 21st Century: The Rise of Hybrid Wars*, Potomac Institute for Policy Studies, Arlington, VA, 2007, p. 29.
3   David Kilcullen, *Out of the Mountains: The Coming Age of the Urban Guerrilla*, Hurst, London, 2013, p. 28.

University has highlighted the geographical (particularly urban) aspects of rogue non-State dynamics: criminal flows, it asserts, go through cities "in a de facto archipelago that runs from inner metropolitan cities of the United States to the *favelas* of Rio de Janeiro to the *banlieues* of Paris to the almost continuous urban slum belt that girds the Gulf of Guinea from Abidjan to Lagos".[4] A similar dynamic underlines the illicit profits driving the shift from inter-State to intra-State war according to Paul Collier's classic "greed" theory of civil war.[5] Subsequent studies have shown that "urban lawlessness" can nurture similar conflict economies: writing on the effects of neighbouring conflicts in Kabul (Afghanistan) and Karachi (Pakistan), Daniel Esser concludes that "the 'classic' rural warlord seems to morph gradually into a modern urban one".[6] With more to gain in cities, with their illicit economies, non-State armed groups have been urbanizing alongside the broader populations of developing countries.

Indeed, some of the most intense battles in recent years have taken place in cities, with State and non-State forces fighting each other among large civilian populations. In the case of the Syrian city of Aleppo, the destruction and depopulation in some areas has been almost total: as a city that has existed for four millennia, it lost over half of its population in five years.[7] Mosul, in Iraq, also faces bombardment as government forces try to expel members of the so-called Islamic State, while the eastern Ukrainian cities of Donetsk and Luhansk faced heavy-weapon fire attacks by separatists and government troops in 2014.[8] The conduct – and impacts – of urban warfare in such cases have appeared disturbingly unchanged from historic trends: high levels of violence and a corresponding effect on infrastructure and populations. Whereas most post-conflict and fragile settings have experienced much lower-intensity fighting, the rising pace of urbanization and non-State armed activity widens the scope for political violence in cities. This only adds to the challenge ahead for the international peace and security architecture, as urban conflict can take many shapes. In fact, as demonstrated below, the ambiguity and variety of non-State armed groups have been key aspects of current conflicts.

These challenges are amplified as the global urban population grows, particularly in the neighbourhoods of fragile countries and those facing ongoing

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4   Nils Gilman, Jesse Goldhammer and Steven Weber, "Deviant Globalization", in Michael Miklaucic and Jacqueline Brewer (eds), *Convergence: Illicit Networks and National Security in the Age of Globalization*, NDU Press, Washington, DC, 2013, p. 5.

5   Paul Collier and Anke Hoeffler, "Greed and Grievance in Civil War", *Oxford Economic Papers*, Vol. 56, No. 4, 2004.

6   Daniel Esser, "The City as Arena, Hub and Prey: Patterns of Violence in Kabul and Karachi", *Environment and Urbanization*, Vol. 16, No. 2, 2004, p. 37.

7   Holly Yan and Eyad Kourdi, "Aleppo: Who Still Lives in This Decimated City – and Why?", *CNN*, 21 November 2016, available at: http://edition.cnn.com/2016/10/20/middleeast/who-is-left-in-aleppo/ (all internet references were accessed in November 2016).

8   Dominic Evans and Ahmed Rasheed, "West Mosul shelled as Iraq Steps Up Fight against Islamic State", *Reuters*, 5 December 2016, available at: www.reuters.com/article/us-mideast-crisis-iraq-idUSKBN13U1U2; International Institute for Strategic Studies (IISS), "Europe and Eurasia: Ukraine", in *Armed Conflict Survey 2016*, Routledge, London, 29 March 2016, pp. 297–299.

conflicts – as in the cases of sub-Saharan Africa and South Asia.[9] While armed conflict, as in the cases of Mosul, Aleppo and Donestk, is not solely caused by urban population pressures, population growth is a further risk factor in developing countries in fragile or conflict-affected regions. Equally, with more than half of the global population living in built-up areas, it seems clear that armed conflicts do not arise purely due to failures of metropolitan services or overcrowding. Instead, these urban sources of pressure often interact with existing political and socio-economic tensions. The result is a higher potential for disruption and protracted violence in complex urban conflicts, with unpredictable but frequently disruptive (and deadly) effects.

The rising complexity and unpredictability of urban armed conflict has sparked a search for new policy ideas. For instance, the concept of resilience to shocks (including conflict and other violence) has gained traction among urbanists, while humanitarian agencies have strived to understand the specific challenges of urban areas and urban refugees. Post-conflict societies in Latin America and South Africa have sought to tackle segregation and crime through urbanistic interventions, attempting to transform street patterns, revitalize slums and improve mobility. The military understanding of urban environments, in contrast, has been relatively stalled.

When it comes to military responses in urban areas, the strategic studies literature or official military documents make for grim reading: articles from the 2000s onwards carry titles such as "The New Middle Ages", "Feral Cities", "Cities without Joy" and "Battleground Metropolis", reflecting the overall conclusion that urban warfare is destined to remain a go-to response characterized by destructive and high-intensity military operations even in (or because of) increasingly larger and denser cities[10]. As Michael Evans writes in this issue of the *Review*, Western strategic studies have long focused on the "anarchy" aspect of urbanization, distracting from multidisciplinary urban strategic studies.[11]

Fortunately, strategic thinkers and military planners have also signalled their willingness to accept the multidimensional character of urban warfare, paving the way for a constructive dialogue with other fields of policy action. The instability and vulnerability of rapidly urbanizing developing-world cities makes

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9   The 2014 United Nations (UN) *World Urbanization Prospects* report lists the following countries as facing the biggest urban population growth by 2050: China, India, Nigeria, the Democratic Republic of the Congo, Ethiopia, the United Republic of Tanzania, Bangladesh, Indonesia and Pakistan, and the United States. As fragile countries, the Organisation for Economic Co-operation and Development (OECD) lists five countries from South Asia and twenty-eight from sub-Saharan Africa. UN Department of Economic and Social Affairs, *World Urbanization Prospects, the 2014 Revision: Highlights*, New York, 2014; OECD, *States of Fragility 2015: Meeting Post-2015 Ambitions*, Paris, 2015, p. 15.

10 John Rapley, "The New Middle Ages", *Foreign Affairs*, Vol. 85, No. 3, 2006 available at: www.foreignaffairs.com/articles/2006-05-01/new-middle-ages; Richard J. Norton, "Feral Cities", *Naval War College Review*, Vol. 56, No. 4, 2003; Michael Evans, "Cities without Joy: Urban Warfare in the 21st Century", *Australian Army Journal*, Vol. 2, No. 2, 2005; Alex Ward, "Battleground Metropolis: The Future of Urban Warfare", *National Interest*, 24 March 2015, available at: http://nationalinterest.org/feature/battleground-metropolis-the-future-urban-warfare-12467.

11 See Michael Evans, "Future War in Cities: Urbanization's Challenge to Strategic Studies in the Twenty-First Century", in this issue of the *Review*.

the search for alternatives to full-scale urban warfare particularly urgent. This is especially true given the modest changes diagnosed in the recent conduct of urban warfare (which we will explore in more detail below). Emerging frameworks of analysis and practice intended to prevent the occurrence of, or relapse into, armed conflict have not been consistently explored in the context of urban warfare, although studies into prevention of criminal violence are relatively more advanced.[12]

The purpose of this article is to explore the implications of increasing vulnerability of urban centres to armed conflict and other instances of politically motivated, low-intensity collective violence, with a specific focus on policy frameworks intended to prevent warfare or steer countries (or, in this case, cities) away from it – conflict prevention, peacebuilding and peacekeeping, broadly speaking. Armed conflict is understood here as the organized practice of armed violence of a sufficient intensity with a political purpose, involving State and/or non-State actors (the latter being by far the predominant format of armed activity in the contemporary world), whereas collective violence is a broader category, encompassing protracted but less intense forms of conflict involving non-State actors such as militias, insurgents and gangs with territorial ambitions and political affiliations. The latter category is further explained below in a discussion on evolving analyses of the "changing character" of conflict. This article will not explore instances of primarily profit-driven criminal violence. The article will show how the relative absence of efforts to understand the urban imperatives of conflict prevention and peacebuilding is linked to a still ongoing effort to define and implement policy principles such as prevention, stability, reconstruction, humanitarian intervention and other international policies designed to bring States back from internal war and towards "normalcy". The central argument is that the conduct, management and impacts of conflicts affect the functioning of urban systems, which, as a result, have a key role to play in prevention and recovery towards peace. These mutually influencing dynamics (city functioning and security interventions) have been neglected, especially in contexts where militaries have had the lead over missions, due to a still incipient embrace of local perspectives for dealing with armed conflict and other instances of non-State groups waging protracted violence.

Military dilemmas in urban warfare

There has been a growing call for multidisciplinary approaches to military operations in cities. This stems from a widespread view, in the literature of strategic studies and humanitarianism, that accelerated urban growth in developing and, particularly, fragile States will lead to increasing momentum for war in cities. A recent attempt by the US Army to prepare for urban operations

12 See, for instance, Robert Muggah, *Researching the Urban Dilemma: Urbanization, Poverty and Violence*, International Development Research Centre, Ottawa, 2012.

by creating a "Megacities Concept Team" was criticized by a senior author as being too narrow in its focus on combat: "the quickest way to degrade American combat power will be to deploy large numbers of troops into a megacity without a thorough examination".[13] Alice Hills, writing on "future war in cities", argues that the "tactical emphasis" by militaries in their strategic and doctrinal documents is "necessary but not sufficient" to understand such a complex environment.[14] While other policy areas were cited as necessary additions to the strategic studies focus, the effort is embryonic and faces significant obstacles within the very foundations of how both practitioners and strategists think about war.

Attempts to conceive new approaches to prevention and recovery from war have clashed with long-standing views on the role of military action. Whereas cities have consistently been understood as complex systems – in which damage or disruption to one element causes a wider and often unpredictable impact on others – recent military practices have followed much narrower parameters. This narrow view is best described by a former practitioner of urban warfare, David Kilcullen, when he warns about the preference of official institutions and academic departments for "single-threat" analyses – concepts such as counter-insurgency and counterterrorism.[15] These single-threat perspectives have unquestionable merits, but they become problematic in complex and well-connected cities. They also clash the growing evidence (further explored below) pointing to a widening array of formats and motivations for non-State armed groups and their proliferation in metropolitan areas.

In settings as diverse as Karachi, Baghdad, Gaza, Mogadishu and Port-au-Prince, there has been a well-documented movement away from classic insurgency and towards complex, self-funded and native armed movements heavily involved with organized criminal activities and terrorism, sometimes linked to other militias and transnational networks.[16] In an expression that has become one of the guiding principles of the North Atlantic Treaty Organization (NATO) for its future planning, the character of conflict has taken a turn towards hybridity – a concept that denotes, as Frank Hoffman puts it, a fusion of different forms of armed activity in a single environment.[17] Unfortunately for cities, they are forecast to have a crucial role in "hybrid wars": by their very nature as diverse, dense and well-connected systems, they are the preferred environments from which to draw out conflicts and "protract their duration and costs".[18]

Even outside of a purely military perspective, there has been broad agreement that global urbanization trends have made occurrences of armed threats more likely and protracted in the developing world's sprawling

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13   Michael Evans, "The Case *against* Megacities", *Parameters*, Vol. 45, No. 1, 2015, p. 42.
14   Alice Hills, *Future War in Cities: Rethinking a Liberal Dilemma*, Frank Cass, London, 2004, p. 5.
15   D. Kilcullen, above note 3, p. 16.
16   See, for instance: A. Hills, above note 14, p. 4; Antônio Sampaio, "Violent Cities Need Whole-Government Solutions", *BeyondBrics*, 12 October 2015, available at: blogs.ft.com/beyond-brics/2015/10/12/violent-cities-need-whole-government-solutions/; D. Kilcullen, above note 3.
17   F. G. Hoffman, above note 2.
18   *Ibid.*, p. 15.

metropolitan zones. International organizations such as the World Bank and the United Nations (UN) have occasionally resorted to the term "fragile city" to describe sprawling areas where rapid growth has overwhelmed local coping systems and reshaped identities, agency and social relations.[19] Humanitarian agencies have intensified their efforts to understand responses to conflicts in urban areas, crystallized by the launch of a Global Alliance for Urban Crisis during the first World Humanitarian Summit, convened by the UN in 2016.[20]

Long-term studies in areas affected by war have shown the diverse and enduring manifestations of conflict in large urban centres. Kabul and Karachi, two key economic hubs affected by the long-standing conflict in Afghanistan, have experienced rising armed violence amid a context of rapid population growth (partially driven by migration from rural areas) and diminishing social cohesion. One frustrated urban planner wrote, after working with reconstruction in war-torn Mogadishu, that "post-conflict reconstruction is a thing of the past", since many armed conflicts have become increasingly protracted.[21]

Yet, the prevailing military practice and theory of urban operations is to adopt tactical guidelines that prioritize combat operations and presume a clear-cut separation between war and peace. Military doctrines and practice have had little to no interaction with ideas from the planning, development and administration of cities. The tactical biases of armed forces have led to what Alice Hills has described as "generic concepts and doctrine":[22] urban deployments have been traditionally viewed as relatively "minor" categories of operations, whereas much more attention has been paid to laying out tactics and procedures, such as rules of engagement, logistics preparations and the right classes of artillery and air support capabilities.

The classic manifestation of this tactical bias is the concept of Military Operations on Urbanized Terrain (MOUT), born in a 1979 US Army field manual which also stressed that built-up areas are essentially too hostile and risky and should be avoided.[23] The MOUT concept reflected a reluctance to look at the complexities of cities precisely because they were not neatly compatible with the force's traditional manoeuvrist preference. Despite the fact that most post-World War II urban conflicts had been against non-State armed groups, MOUT drew heavily from lessons from industrial warfare in WWII urban theatres.[24] At the turn of the millennium, Ralph Peters' influential article "Our Soldiers, Their

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19 See R. Muggah, above note 12, p. 22 ff.

20 See Global Alliance for Urban Crises, *Adapting Global Crisis Response to an Urban World*, 25 March 2016, available at: http://unhabitat.org/wp-content/uploads/2016/05/Global-Alliance-for-Urban-Crises-Overview-25-March-2016.pdf.

21 Mitchell Sipus, "Post-Conflict Reconstruction Is Dead", *Humanitarian Space*, 3 April 2014, available at: www.thehumanitarianspace.com/2014/04/post-conflict-reconstruction-is-dead.html.

22 A. Hills, above note 14, p. 7.

23 US Department of the Army, *Military Operations on Urbanized Terrain (MOUT)*, FM 90-10, 15 August 1979, p. 14, available at: https://archive.org/details/milmanual-fm-90-10-military-operations-on-urban-terrain-mout.

24 Michael Evans, *City without Joy: Urban Military Operations into the 21st Century*, Australian Defence College, Canberra, 2007, p. 12.

Cities" made the case for a return to full-scale urban warfare as "necessary" for US intervention or assistance to foreign allies in the next century, despite pointing out its essentially destructive character, saying "atrocity is close-up and commonplace".[25] This endured until as late as 1998, when a manual published by the US Marine Corps recommended the use of tanks and artillery (both direct and indirect fire types) alongside heavy infantry presence.[26] MOUT has had a profound influence in Western military thinking, guiding NATO urban combat training systems.[27] Despite pointing to "a number of recent catastrophic failures in MOUT" by the United States in Mogadishu and Russia in Grozny, Chechnya, a recent US Army study has emphasized the need to continue to study and train for MOUT due to current global urban population trends.[28]

The problem with this approach is not related to the tactical level – it is perfectly reasonable that armed forces prepare for urban combat operations. On a strategic and doctrinal level, however, the scarcity of multidimensional perspectives guiding militaries' view on cities becomes problematic when one takes into consideration their own assessment of cities' rising vulnerability to armed activity. This scarcity paves the way for a shortage of policy options when it comes to protracted, "hybrid" armed conflict that doesn't quite fit within narrow parameters of combat or peace.

Preventing conflict in cities: Local relevance in a world of nation-States

In an apparent attempt to bypass these security dilemmas, the concept of conflict prevention has gained traction among a variety of voices within the peace and security community. Like so many of the concepts popular among international organizations (in this case mainly the UN), conflict prevention is deeply rooted in a classic and State-centric view of armed conflict. It traces its roots to UN Secretary-General Hammarskjöld, who emphasized the term "preventive diplomacy" in 1960, aiming at the superpowers and their proxy wars in "third world" countries.[29]

The idea that conflict prevention is something that can take the form, across the globe, of negotiations between two clearly delineated "parties" that then decide to settle their differences peacefully has endured since then. Indeed, this formulation forms the backbone of the "prevention" section in the influential 1992 UN

25 Ralph Peters, "Our Soldiers, Their Cities", *Parameters*, Vol. 26, No. 1, 1996.
26 US Marine Corps, *Military Operations on Urbanized Terrain (MOUT)*, 26 April 1998, pp. 1–13, 1–14, available at: www.marines.mil/Portals/59/MCWP%203-35.3.pdf.
27 NATO, *Urban Combat Advanced Training Technology*, July 2015, available at: www.sto.nato.int/publications/STO%20Technical%20Reports/STO-TR-MSG-063/$$TR-MSG-063-ALL.pdf.
28 Michael C. Desch, "Why MOUT Now?", in Michael C. Desch, *Soldiers in Cities: Military Operations on Urban Terrain*, Strategic Studies Institute, Carlisle, PA, October 2001, p. 2.
29 Cited in Michael S. Lund, "Conflict Prevention: Theory in Pursuit of Policy and Practice", in Jacob Bercovitch, Victor Kremenyuk and I. William Zartman (eds), *The SAGE Handbook of Conflict Resolution*, SAGE Publications, Thousand Oaks, CA, 2009, p. 288.

Agenda for Peace, alongside peacemaking and peacekeeping.[30] The Brahimi Report, which is widely credited with having established the "primacy of politics" in UN missions, establishes from the outset "the essential responsibility of Member States for the maintenance of international peace and security",[31] and reinforces "diplomatic initiative" as the "usual" instrument for conflict prevention.[32] While this is an important focus in a world in which sovereign States are the dominant form of political organization, its nation-State bias influences policies and bureaucratic structures in a way that bypasses local perspectives.

The practical outcome of this strategic orientation has been the development of a toolbox that has limited application for urban environments. Most of today's go-to instruments for applying the principles of conflict prevention reflect a preference for high-level interactions at the federal levels: special political missions, the Mediation Support Unit and Special Envoys. These instruments, while extremely important for the work of the UN, have limited applicability for urban environments, where armed groups have tended to display little disposition for negotiations and conflict has acquired a protracted form. The UN itself has had encounters with such urban conflicts, for instance in Mogadishu, where the conquest of the city by an international mission, the presence of a large peacekeeping force and the establishment of a federal government in 2012 have not prevented Al-Shabaab and local militias from operating with impunity in many areas.[33] In the Central African Republic, a peace agreement in 2008 helped reduce direct violence from rebel groups, but the capital Bangui saw little in the way of security improvements due to regular outbreaks of armed violence by sectarian militias, who seem to lack the cohesion and top-down leadership that has usually been a requirement for formal peace talks.[34] An escalation in factional fighting between Christian and Muslim community militias in the streets of the capital in November 2013 prompted warnings that the country was "on the verge of genocide" and the deployment of additional peacekeepers.[35]

One of the cornerstones of conflict prevention efforts is the development of an early-warning system, which in theory enables decision-makers to scan emerging armed threats and political conflicts. Like conflict prevention, it has been on the rise in the discourses of organizations involved with peacekeeping and peace support,

30 *An Agenda for Peace: Preventive Diplomacy, Peacemaking and Peacekeeping*, Report of the Secretary-General pursuant to the statement adopted by the Summit Meeting of the Security Council on 31 January 1992, UN Doc. A/47/277, 17 June 1992, available at: www.un-documents.net/a47-277.htm.
31 Report of the Panel on United Nations Peace Operations, UN Doc. A/55/305, 21 August 2000 (Brahimi Report), p. 1, available at: www.un.org/en/ga/search/view_doc.asp?symbol=A/55/305.
32 *Ibid.*, p. 2.
33 Muhyadin Ahmed Roble, "Mogadishu's Dilemma: Who's in Control?", *Terrorism Monitor*, Vol. 11 No. 12, 2013, available at: https://jamestown.org/program/mogadishus-dilemma-whos-in-control/.
34 International Crisis Group, *Central African Republic: The Roots of Violence*, Africa Report No. 230, 21 September 2015, p. 3, available at: https://d2071andvip0wj.cloudfront.net/230-central-african-republic-the-roots-of-violence.pdf.
35 David Smith, "Unspeakable Horrors in a Country on the Verge of Genocide", *The Guardian*, 22 November 2013, available at: www.theguardian.com/world/2013/nov/22/central-african-republic-verge-of-genocide.

such as the UN and the European Union. In 2010, for instance, the UN Security Council introduced regular "horizon-scanning" meetings for this purpose.[36] However, similar to conflict prevention, these meetings are dominated by broad national-level assessments, manifested mainly in the use of the "fragile State" label as a key requirement for problems to "qualify" for the exercise. As a report by the Clingendael Institute has put it, the key problem with relying on measurements of State fragility for early-warning systems is that "rather than measuring conflict risk itself [the mechanism] measures state fragility as an inevitable precondition for armed conflict".[37] The consequence has been, as the report makes clear, a focus on national elites to the detriment of "local and transnational networks of power", as many non-State armed groups in countries as diverse as Libya and Honduras focus on local pockets of authority and are divided in factions, rendering national ambitions rare and quasi-irrelevant.

Furthermore, early-warning mechanisms are biased towards the so-called "conflict trap" theory, which establishes that countries which have faced armed conflict in the recent past are more likely to face it again. The bias comes with good reason: as the World Bank's 2011 *World Development Report* highlights, 90% of civil wars during the 2000s took place in countries that had registered another civil war in the last thirty years.[38] So it would be unwise to even consider disregarding this type of data for conflict prevention. However, it would be equally unwise not to recognize that there are increasingly important geographical variations in conflict trends which affect cities in a different way than States – for instance, conflict can erupt in a specific large city before it spreads. Local incidents can ignite or reignite conflicts, due to the close proximity of warring groups or the symbolism of certain buildings in cities. This seems to be a frequent occurrence in the Middle East, where non-State armed groups resident in Gaza frequently spark Israeli retaliations. In Bangui, capital of the Central African Republic, the death of a taxi driver sparked a wave of ethnically and religiously inspired killings and attacks on government and civilian buildings in 2015.[39] Also, conflict can become restricted to one or a few cities while still causing vast human suffering and economic damage, as both populations and economic assets tend to concentrate in such areas. This is the case in Karachi, a city with recurring cycles of political violence that do not affect Pakistan's other main cities or the surrounding countryside to the same extent.[40]

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36 "Horizon-Scanning Briefings", *Security Council Report*, 16 June 2016, available at: www. securitycouncilreport.org/un-security-council-working-methods/horizon-scanning-briefings.php.
37 Fransje Molenaar and Rosan Smits, *Capturing Politics and Power: An Updated Approach to Early Warning and Action*, Clingendael, June 2016, p. 2, available at: www.clingendael.nl/sites/default/files/Capturing% 20politics%20and%20power%20June%202016.pdf.
38 World Bank, *World Development Report 2011: Conflict, Security and Development*, Washington, DC, 2011, p. 2, available at: siteresources.worldbank.org/INTWDRS/Resources/WDR2011_Full_Text.pdf.
39 Elsa Buchanan, "Central African Republic: UN Calls for Immediate End to 'Unacceptable' Violence and Retaliation Attacks", *International Business Times*, 29 September 2015, available a: www.ibtimes.co.uk/ central-african-republic-un-calls-immediate-end-unacceptable-violence-retaliation-attacks-1521621.
40 Huma Yusuf, *Conflict Dynamics in Karachi*, US Institute of Peace, 19 October 2012, available at: www. usip.org/publications/conflict-dynamics-in-karachi.

There has been a recent move towards an expansion in scope of the conflict prevention framework, towards what is called "systemic" or "deep" prevention: policies that address social root causes of conflicts and institutional or policy deficits that undermine peace.[41] This approach has been criticized for being too broad, embracing institutional development, socio-economic measures, the environment, humanitarian aid, military deployments etc.[42] However, in the context of at-risk cities, this broad and holistic strategy can be grounded in geographical realities. What seems like an impossible coordination task in vast national territories has the potential to be more manageable when targeted at vulnerable peripheries with clear and practical needs. This approach has demonstrated results in Medellín, Colombia, having helped raise the city's reputation and even "brand" as a success case of recovery from conflict (especially within the broader Colombian context of large-scale guerrilla activity).[43] The strategy was broad and holistic: it included several types of interventions, from the building of public transportation to libraries, schools and bold architectural projects in marginalized *comunas* or slums.[44] Additionally, it was disciplined by a strategy with clear and delimited objectives. It centred on peripheries with high incidences of armed conflict and the presence of guerrilla units, with the aim of integrating them into the broader urban society and therefore encouraging education and jobs. This is an instance in which the pattern of conflict in one city has been markedly different from the country as a whole: armed activity in Medellín decreased even though left-wing insurgent groups still counted many thousands of armed fighters across Colombia and were highly active in rural areas.

Post-conflict transition and the city

When armed conflict, in its various sizes and shapes, does erupt in – or end up enveloping – cities, international interventions and current security-and-development approaches still struggle to respond. There is a tension between the increasing vulnerability of cities amid changing patterns of armed conflict and the relative continuation of combat-centric approaches to security in cities. This tension is related to a long-standing and broader discussion about the extent to which armed intervention helps or hinders the pursuit of peace.[45] It is not the aim of this article to weigh in on this discussion, but to display the emerging frameworks designed to steer countries away from armed conflicts by using non-combat tools, or to minimize these tools within a multidimensional policy intervention.

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41 M. S. Lund, above note 29, p. 290.
42 *Ibid.*, p. 289.
43 Judith Rodin, "The Transformation of Medellín Provides a Model for Cities Worldwide", *The Guardian*, 10 April 2014, available at: www.theguardian.com/cities/2014/apr/10/medellin-transformation-model-cities-worldwide-resilience.
44 A. Sampaio, above note 16.
45 See, for instance, Robert C. Johansen, "UN Peacekeeping: The Changing Utility of Military Force", *Third World Quarterly*, Vol. 12, No. 2, 1990.

These initiatives have been frequently discussed within the framework of "security and development", and gained strength following the 2011 publication by the World Bank of its annual *World Development Report* focusing on conflict, security and development.[46] It highlighted a challenge facing different communities of practice: "bringing security and development together to put down roots deep enough to break the cycles of fragility and conflict".[47] But it also inevitably reflected the same nation-State bias that affects conflict prevention and other peace-and-security concepts. The report has little to say about sub-national policy challenges, armed threats or agencies, despite the fact that municipalities are at the forefront of many of the crucial security-and-development challenges highlighted therein. While recognizing rapid urbanization as a key driver of insecurity, the World Bank report supports its case for a security-and-development focus on national-level challenges of fragile States and the Millennium Development Goals. It also makes clear that it is speaking to an audience of central government authorities and regional and global institutions – therefore bypassing local-level perspectives.[48]

Perhaps more worrying for citizens of fragile cities is the fact that the broader international security and development tools have scarcely looked specifically at cities as settings with peculiar needs and dynamics affecting conflict prevention and post-conflict recovery. Another key document laying out international strategies to promote peace and avoid war, the Panel on United Nations Peace Operations' 2000 Brahimi Report, focused on the member States of the UN – which is understandable given that the organization was founded by nation-States and is tasked with upholding an international order of sovereign States.[49] However, this "nation-State bias" of organizations such as the UN and World Bank has been replicated by a great number of experts and practitioners in discussions about peace promotion and conflict prevention. A gap has therefore formed in the thinking on how local instances of governance, bureaucracy and policy can interact with and even change some assumptions of the international peace and security frameworks.

The implications of this gap have recently begun to be explicitly discussed. In a 2016 article entitled "Peacekeeping in Cities: Is the UN Prepared?", UN University authors highlight that a recent review by the High-Level Independent Panel on Peace Operations (HIPPO) failed to mention the words "urban" and "cities" in its 104-page report.[50] Despite that, the article proceeds to mention instances where peacekeeping forces are active in highly violent cities, such as Bangui and Port-au-Prince.[51] The piece, therefore, begins to show the tensions

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46   World Bank, above note 38.
47   *Ibid.*, p. xi.
48   For instance, the foreword states that the report is "important for all countries – low, middle, and high income – as well as for regional and global institutions". *Ibid.*, p. xi.
49   Brahimi Report, above note 31.
50   Louise Bosetti, Hannah Cooper, John de Boer and Menaal Munshey, *Peacekeeping in Cities: Is the UN Prepared?*, United Nations University Centre for Policy Research, 12 April 2016, available at: cpr.unu. edu/peacekeeping-in-cities-is-the-un-prepared.html.
51   *Ibid.*

within international peace and security frameworks due to recurring statist bias amid challenging local contexts.

The practice of international aid by developed countries shares a similar bias: according to a 2009 study, international aid to cities has amounted to $3 billion per year on average since the 1970s, a fraction of overall donations to the developing world.[52] An experienced practitioner of urban development who has advised in Afghanistan and Somalia has recently expressed this gap by asking: "If a city is destroyed by an aggregate of non-state actors, then is it reasonable to expect state-based reconstruction to be effective?"[53] "Unlikely", is his answer.[54]

The nation-State bias of post-conflict transition mechanisms has only recently begun to be openly discussed (and, to some exchanged, challenged) by urbanists – for instance, through the New Urban Agenda adopted by all UN member States in 2016, emphasizing the need to pay "special attention" to cities undergoing post-conflict transitions.[55] But the bias is also partially caused by a lack of overall clarity around the challenges that security and development are supposed to solve in the metropolises of the developing world.

Blurred lines and blurred responses in cities

One of the difficulties involved in responding to local conflict dynamics is the lack of clarity in categorizing the armed challenges involved. This is related to a broader trend, often referred to as the "changing character of war", which affects the way we understand urban conflicts. The Armed Conflict Survey published in 2015 summarized the recent changes in conflict trends as the decline of clashes between States while "intra-state conflict remains a significant destabilising factor around the world".[56] These shifts also point to a "proliferation of non-state armed actors rooted in cities throughout the global south", accompanied by a blurring of distinctions between political violence in the form of insurgency or civil war, and violence perpetrated by gangs and militias with less clear political motivations.[57] These types of armed violence can occur simultaneously, or in a quick succession that defies clear demarcations of "beginning" and "end" of each type. This blurring of classic lines in categories of conflict has direct relevance for urban areas.

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52 Michael Cohen, *Urbanization and Conflict: Trends, Impacts, and Challenges for Development Assistance*, International Affairs Working Paper, The New School, New York, December 2009, p. 54.
53 M. Sipus, above note 21.
54 *Ibid.*
55 Antônio Sampaio, *Our Fast-Growing Cities Have Become Hotbeds of Unrest. It Doesn't Have to Be That Way*, World Economic Forum Agenda, 10 November 2016, available at: www.weforum.org/agenda/2016/11/fragile-cities-habitatIII-new-urban-agenda.
56 IISS, *Armed Conflict Survey 2015*, Routledge, London, 20 May 2016, p. 7.
57 Diane Davis, "Non-State Armed Actors, New Imagined Communities, and Shifting Patterns of Sovereignty and Insecurity in the Modern World", *Contemporary Security Policy*, Vol. 30, No. 2, 2009, p. 234.

There is still significant discussion and disagreement about what exactly is the "new" character of armed conflict in today's world. But, echoing the views of strategic and military thinkers such as Kilcullen and the proponents of "hybrid wars", there is a strong indication that one of the main changes relates to geography. The findings of Oxford University's study *The Changing Character of War* mention that "the most striking factual change" is "the unlocking of the close relationship between war and the state".[58] During the two centuries between 1750 and 1950, both State and non-State armed forces had their eyes locked on the nation-State in their efforts to promote nationalist ideologies, gain independence or overthrow groups at the helm of the State[59]. The new reality, the authors explain, is characterized by "civil wars" driven by local or transnational identities.[60] Likewise, the non-State armed groups observed in so many current conflicts (as outlined above) have been described as "new imagined communities" challenging the power and legitimacy of the nation-State.[61] This seems in line with what the Cities and Fragile States project, within the London School of Economics, concluded about the relationship between cities and conflicts: at the same time that the metropolis strengthens the financial and developmental capacities of the State, it also exacerbates antagonisms between groups, with cities becoming increasingly "primary sites of state erosion and crisis across much of the developing world".[62] Therefore, despite their potential to unlock economic and social development, urban areas have become vulnerable to current trends in conflict, especially due to the dissociation of violent mobilization from the State towards local, and often non-State, entities.

Recent urban conflicts seem to confirm the trend towards the widening range of non-State armed activity. In Bangui, the international peacekeeping forces have had to intervene, enforce law and mediate among warring ethnic-based militias perpetrating bursts of violence that often resemble low-intensity civil wars.[63] In 2004, UN forces entered the Haitian capital, Port-au-Prince, planning to deal with armed groups supporting or opposing former president Jean-Bertrand Aristide.[64] Instead, they were caught in a twelve-hour battle with amorphous gangs in the Cité Soleil slum. Other conflicts display similar difficulties in identifying the nature of non-State armed challenges. In the Crimea crisis during 2014, the term "little green men" was widely used in the press to

58 Hew Strachan and Sibylle Scheipers, "Introduction: The Changing Character of War", in Hew Strachan and Sibylle Scheipers (eds), *The Changing Character of War*, Oxford University Press, Oxford, 2011, p. 14.
59 *Ibid.*
60 *Ibid.*, pp. 14–15.
61 D. Davis, above note 57, p. 225.
62 Jo Beall, Tom Goodfellow and Dennis Rodgers, *Policy Directions: Cities and Conflict*, Crisis States Research Centre, June 2010, p. 1, available at: www.lse.ac.uk/internationalDevelopment/research/crisisStates/download/Policy%20Directions/Cities%20and%20Conflict.pdf.
63 Aditi Gorur and Lisa Sharland, "The Central African Republic Is Still in Crisis. Can UN Peacekeepers Help?", *The National Interest*, 11 November 2015, available at: http://nationalinterest.org/feature/the-central-african-republic-still-crisis-can-un-14309.
64 Colum Lynch, "U.N. Peacekeeping More Assertive, Creating Risk for Civilians", *Washington Post*, 15 August 2005, available at: www.washingtonpost.com/wp-dyn/content/article/2005/08/14/AR2005081400946.html.

describe armed groups which seemed to be a combination of Russian proxies and self-defence groups that seized official buildings in Donetsk, Kharkiv and Luhansk.[65]

These conflict changes, particularly the trend towards non-State armed activity in urban areas, pose severe problems for conflict prevention and post-conflict transition processes. Writing on the future of urban warfare, US General Charles Krulak took on board this ambiguity in his theory of a "three-block war". State forces, he wrote, "may be confronted by the entire spectrum of tactical challenges" within "three contiguous city blocks", mixing combat, peacekeeping and humanitarian relief.[66] Ambiguity is also present at the onset of missions tasked purely with keeping or building peace. The aforementioned HIPPO review, for instance, exposed a key source of contradiction in peacekeeping operations: that they are deployed increasingly to environments "where there is little or no peace to keep".[67]

But the problem is aggravated in urban areas by a State-centric architecture of peace and security that has adopted ambiguous relationships with sub-national players. The 1993 battle in Mogadishu, in which eighteen US soldiers and hundreds of Somali combatants and civilians were killed, was partially a result of a confrontational approach towards warlord Mohammed Aidid and his militia, which held considerable power. After the devastating impact of the operation, as described in the seminal book *Black Hawk Down*,[68] Aidid was eventually integrated into the post-conflict phase (and was in fact flown to a peace conference on board a US plane).[69] In summary, the track record of peacebuilding and peacekeeping shows a capacity deficit in handling the multiplicity and diversity of non-State armed groups in chaotic developing-world cities.

This lack of clarity tends to require improvised responses from international missions tasked with building or keeping peace. Occasionally, international peacekeeping missions have had to resort to tactics resembling urban warfare. The distinction between urban warfare and peacekeeping has again become blurred in today's Mogadishu, where a fragile State and its peacekeeping supporters share control of districts with Al-Shabaab and clan-based militias – and sometimes directly clash with them[70]. The tough stance on gangs in Cité Soleil, Port-au-Prince's chaotic mega-slum, was credited with stabilizing Haiti's capital, if only temporarily. In fact, one study has credited the

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65 "Boys from the Blackstuff", *The Economist*, 19 April 2014, available at: www.economist.com/news/briefing/21601048-government-kiev-has-no-obvious-counters-russian-inspired-occupations-industrial.

66 Charles Krulak, "The Strategic Corporal: Leadership in the Three Block War", *Marines Magazine*, January 1999, available at: www.au.af.mil/au/awc/awcgate/usmc/strategic_corporal.htm.

67 *Uniting our Strengths for Peace: Politics, Partnership and People*, Report of the High-Level Independent Panel on Peace Operations, UN Doc. A/70/95-S/2015/446, 17 June 2015 (HIPPO Report), p. 9, available at: www.un.org/en/peacekeeping/resources/reports.shtml.

68 Mark Bowden, *Black Hawk Down*, Corgi, London, 1999.

69 *Ibid.*; Mickey Kaus, "What Black Hawk Down Leaves Out", *Slate*, 21 January 2002, available at: www.slate.com/articles/news_and_politics/kausfiles_special/2002/01/what_black_hawk_down_leaves_out.html.

70 Muhyadin Ahmed Roble, above note 33.

pre-emptive military operations against gangs there as having been "vital for the defense and preservation of the mission's mandate".[71] The fact that this posture results from improvisation, however, displays the mismatch between the challenges and the strategies being deployed in these complex fragile settings. One concept that has been used in diverse conflict locations and fragile contexts is "stabilization". It has been used by Western military forces to describe a wide range of low-intensity peace support operations in fragile settings. A 2004 report by the US State Department said that the United States has started new stabilization and reconstruction operations every eighteen to twenty-four months since the end of the Cold War.[72] In theory, stabilization operations seem like an ideal framework for reducing the likelihood of full-scale war: a UK strategic document describes such operations as a process that combines economic, governance and security measures in order to prevent or reduce violence, protect populations and infrastructure, promote institutions and governance, and achieve other political goals also highlighted in the UN's peace-promotion infrastructure.[73] Like peacekeeping dilemmas, the stabilization agenda seems ambitious and broad. But it is able to call on resources from national defence budgets to a larger extent than UN peacekeeping, which remains dependent on resources and troops offered by member States.

First, a key advantage of the stabilization concept, in relation to "rival" concepts favoured by the UN system, is that it does not carry in its core an immediate allegiance to federal-level nation-State governments. Although missions by a foreign intervention force need to address national governments (or embryonic governments in the case of failed States), stability doctrines have more clearly addressed issues of local and urban settings. For one, stabilization doctrines issued by Western militaries often place emphasis on the impact of urbanization and urban-specific dynamics.[74]

Second, there seems to be a more practical emphasis on the territorial aspect of the tasks needed for stability to be promoted. In contrast to the still lingering dichotomy of conflict and post-conflict present in UN documents, stabilization manuals and doctrines recognize from the onset the struggle for territorial control even in post-conflict situations. The UK military explicitly cites the use of force and offensive action as an "uncomfortable reality", but it frames

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71 Michael Dziedzic and Robert M. Perito, *Haiti: Confronting the Gangs of Port-au-Prince*, Special Report 208, United States Institute of Peace, Washington, DC, September 2008, p. 14, available at: www.usip. org/sites/default/files/sr208.pdf.

72 Defense Science Board, *2004 Summer Study on Transition to and from Hostilities*, US Office of the Under Secretary of Defense for Acquisition, Technology and Logistics, Washington, DC, December 2004, p. iv, available at: www.acq.osd.mil/dsb/reports/ADA430116.pdf.

73 UK Ministry of Defence, *Security and Stabilisation: The Military Contribution*, Joint Doctrine Publication 3–40, Shrivenham, 2009, available at: www.gov.uk/government/uploads/system/uploads/attachment_data/file/49948/jdp3_40a4.pdf.

74 For instance, a 2006 US military Joint Operating Concept dedicates a subsection to urbanization and contains several references to the specific challenges of urban environments. See US Department of State, *Military Support to Stabilization, Security, Transition, and Reconstruction Operations Joint Operating Concept*, Version 2.0, December 2006, available at: www.dtic.mil/doctrine/concepts/joint_concepts/joc_sstro.pdf.

its objectives in less political and more practical, on-the-ground (and probably more measurable) processes such as improving the security situation in a specific location in order to pave the way for other civilian initiatives.[75]

Stability, therefore, is a phased process that carries potential for urban settings, where negotiated settlements to end violence have become the exception rather than the norm. Therefore, gradual and holistic measures designed to prevent and deter further escalation of conflict within specific geographical boundaries have gained traction among military and policing authorities concerned with urban insecurity in situations of formal peace.[76] Following several deployments to the slums of Rio de Janeiro to help clear the way for civilian agencies and development, the Brazilian army released a strategic document on "Guaranteeing Law and Order", which contains some of the same principles as stability.[77] David Ucko has highlighted that stability operations and the related framework of military operations other than war (MOOTW, in a particularly complicated military acronym) "tend to be protracted civil-military affairs, occurring principally in urban environments".[78]

However, at the same time that stability has grown in popularity beyond military circles, it has also become an umbrella term including long-standing security-and-development practices such as disarmament, demobilization and reintegration, civil-military operations and peacekeeping. Despite the popularity of the term among many Western policy-makers, it "continues to face an identity crisis", shifting between an end-state, a process, an intervention template and, even more broadly, a "generic vessel for all ideas and activities related to restoring security and development", as one comprehensive study of the concept has recently highlighted.[79]

Meanwhile, the established practice and doctrinal thought on stability by Western military forces have rendered an inherently military connotation to stabilization. Military practitioners have explored and defined the term more precisely than other communities, as evidenced by the 2015 HIPPO report's reprimand of the UN Security Council for its frequent use of "stabilization" for missions both in post-conflict settings and "in at least one case during ongoing armed conflict".[80] Robert Muggah and Oliver Jutersonke have pointed out that the concept reinforces a "security-first approach" and privileges short-term interventions.[81]

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75   UK Ministry of Defence, above note 73, p. XIII.
76   Robert Muggah, "The United Nations Turns to Stabilization", *International Peace Institute Global Observatory*, 5 December 2014, available at: https://theglobalobservatory.org/2014/12/united-nations-peacekeeping-peacebuilding-stabilization/.
77   Brazilian Ministry of Defence, *Garantia da Lei e da Ordem*, 1st ed., MD33-M-10, 2013, available at: www.defesa.gov.br/arquivos/File/doutrinamilitar/listadepublicacoesEMD/md33_m_10_glo_1_ed2013.pdf.
78   David H. Ucko, *The New Counterinsurgency Era: Transforming the U.S. Military for Modern Wars*, Georgetown University Press, Washington, DC, 2009, p. 48.
79   Steven A. Zyck and Robert Muggah, "Preparing Stabilisation for 21st Century Security Challenges", *Stability: International Journal of Security and Development*, Vol. 4, No. 1, 2015, available at: www.stabilityjournal.org/articles/10.5334/sta.gs/.
80   HIPPO Report, above note 67, p. 44.
81   Robert Muggah and Oliver Jutersonke, "Rethinking Stabilization and Humanitarian Action in 'Fragile Cities'", in Benjamin Perry (ed.), *Modern Warfare: Armed Groups, Private Militaries, Humanitarian Organizations, and the Law*, UBC Press, Vancouver and Toronto, 2012.

A more fundamental problem, however, is that the stability concept shares some of the same tensions cited above related to peacekeeping and MOUT. On the one hand, it has no "magic bullet" alternative to the balance between use of force and peacebuilding amid protracted armed violence. Following the 1993 operational failure by US forces in Mogadishu, the United States adopted a selective approach to stability, choosing to apply this tool in already fairly stable environments and with a focus on reducing risks to US combat forces.[82] On the other hand, this "identity crisis" reduced the effectiveness of the stability concept in both rural and urban settings.

The ongoing changing character of war is partially responsible for such identity crises, which to some extent also affect other mechanisms that are designed to bring peace but which instead encounter increasingly complex challenges related to non-State armed groups. The ubiquity of sub-national forms of conflict seems to be an unfortunate reality of this shift in warfare. During the twentieth century, counter-insurgency presented a handy recipe of response to (rural) non-State political violence. This is no longer the case. Instead, central and local governments struggle with the calibration of security and development in order to manage the widening range of armed activities in cities.

Managing conflict spillover in cities

As urban population growth accelerates in the global South and policy-makers and policy analysts alike continue to point to urbanization as a source of instability, it is important to be clear about the shape of armed activities affecting cities. If prevention and post-conflict mechanisms are to function in the "urban century", they have to adapt to the trends identified above: non-State armed activity amid rapid urbanization. This means that military studies' fears of devastating "megacity warfare"[83] are misplaced. The vulnerability of built-up areas to armed conflict, driven by rapid urbanization and non-State armed activity, looks more like a gradual rise of low-intensity conflict than full-scale urban warfare.

A careful look at the literature concerned with politically oriented armed conflict in cities reveals that protracted, non-State armed activity with hybrid tactics (such as links to insurgencies, terrorism or funding from transnational organized crime) has indeed been registered at several key large cities of the developing world. But such activity tends to take place *after* large-scale conflict or, at other times, is located near areas of conflict and instability rather than in the middle of them.

Very few instances have been registered in the past few decades of foreign military interventions by Western democracies in which large-scale conventional

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82   D. H. Ucko, above note 78, p. 49.
83   William Matthews, "Megacity Warfare: Taking Urban Combat to a Whole New Level", *Army Magazine*, 15 February 2015, available at: www.ausa.org/articles/megacity-warfare-taking-urban-combat-whole-new-level.

land power, which forms the bulk of the MOUT concept, has been applied in densely inhabited urban areas. The main example is that of US and allied operations in Iraq after the 2003 invasion. As Alice Hills writes in an extensive study, urban warfare was widely expected to feature in the invasion and its immediate aftermath. But instead, relatively quick episodes of street fighting took place, followed by a protracted terrorist campaign by non-State actors.[84] The main exceptions that prove the rule have been Iraqi cities conquered by Sunni insurgents (Fallujah, in Anbar province) and later by the so-called Islamic State group, both rare instances of armed groups adopting an openly confrontational urban warfare strategy against a conventional military power.

A frequent feature of contemporary urban armed conflict has been the further blurring of the distinction between enemy non-State groups and the civilian population in intra-State, or non-international, armed conflicts.[85] The main reason for this has been that usually the non-State fighters have been native to the locations in which they are fighting – it is not far-fetched to imagine that some of the warlord's fighters opposing US forces in Mogadishu in 1993, or Hamas in Gaza, are combating some of the world's most capable armies within walking distance from their homes, assuming they survive to dilute back into the urban sprawl that has dominated the landscape in these and many other cities.[86] This trend has been called, in the context of Chechen resistance to Russian forces in the Chechen capital Grozny, "resident insurgency".[87] As one US radio programme narrating the history of the 1993 Battle of Mogadishu states, "there was never even supposed to be a Battle of Mogadishu" – the forces had been sent to a humanitarian mission, which later expanded to a stability operation.[88] The elite Army Rangers involved in the fatidic events, which led to the largest US casualties at that point since the Vietnam War, had been sent with a mission to arrest lieutenants linked to a local warlord – whose militiamen outmanoeuvred the well-equipped Western troops through their far superior knowledge of Mogadishu's narrow streets and alleyways.[89]

The "resident fighters" phenomenon is also seen in the urban peacekeeping battles cited above. Militiamen loyal to current Mogadishu warlords have been battling each other (and occasionally peacekeeping forces) for more than a decade in their respective turfs.[90] In Haiti, the gangs that posed "a potentially lethal threat" to the country's fragile recovery during the 2000s were based in the local

84   A. Hills, above note 14, p. 8.
85   Andreas Wenger and Simon J. A. Mason, "The Civilianization of Armed Conflict: Trends and Implications", *International Review of the Red Cross*, Vol. 90, No. 872, 2008, pp. 841–842.
86   Olga Oliker, *Russia's Chechen Wars 1994–2000: Lessons from Urban Combat*, RAND Corporation, Santa Monica, CA, 2001, p. xv, available at: www.rand.org/pubs/monograph_reports/MR1289.html.
87   *Ibid.*
88   "What a Downed Black Hawk in Somalia Taught America", *All Things Considered*, 5 October 2013, available at: www.npr.org/2013/10/05/229561805/what-a-downed-black-hawk-in-somalia-taught-america.
89   *Ibid.*
90   Mohamed Olad Hassan, "Mogadishu Warlords Merge Militias", *BBC News*, 14 May 2005, available at: http://news.bbc.co.uk/1/hi/world/africa/4547713.stm.

slums.[91] The gangs of Cité Soleil attacked vehicles on a nearby road leading to the airport and threatened the country's main port terminal, forcing the hand of the UN mission commander to enter the slum forcefully and under fire.[92]

Frequently, the destabilizing effects for metropolitan areas are felt after major conflicts end and are linked to complex and gradual trends such as migration, rising ethnic tensions, institutional deterioration and the weakening of urban services. The Pakistani port city of Karachi, a key economic hub, has been affected by high levels of armed violence perpetrated by a variety of groups – some linked to political parties, others to ideologically driven insurgencies in nearby Afghanistan and others directly linked to terrorist attacks in Pakistan's other neighbour, India.[93]

Karachi illustrates the gradual build-up of drivers of instability that can erupt. The city's long history of armed violence and transnational criminality is linked to flows of refugees and migrants from nearby war zones during the past three decades, which have helped propel the population to grow by 115% between 1998 and 2011 (an addition of 11 million people), according to the latest census data.[94] This virtually unmanageable population growth has been absorbed in large part by informal housing in sprawling slums, which in turn has contributed to the emergence of an estimated 200 criminal gangs, operating alongside, and sometimes in partnership with, political-ideological extremist groups such as the Taliban – leading one author to warn of the "Talibanisation" of Karachi.[95] As Laurent Gayer observes, the city has "turned into a battleground for rival armed groups competing for votes, land, jobs" and protection money (extortion).[96]

These instances of low-intensity conflict are the most prominent faces of current urban armed conflict. Whereas current wars have featured high-intensity combat in places like Aleppo, Mosul and Fallujah, these are atypical examples of non-State groups seeking direct territorial "conquest" and administration. The real challenge is more nuanced: non-State groups versed in low-intensity conflicts ubiquitously acting in fragile cities. This context has not been fully absorbed by either the military or peacebuilding communities: the former has until recently focused on MOUT and related forms of "megacity warfare", while the latter retains a nation-State bias. But the growing recognition of this challenge can

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91 M. Dziedzic and R. M. Perito, above note 71, p. 2.
92 *Ibid.*
93 Dean Nelson, "Pakistan Details How Lashkar-e-Taiba 2008 Mumbai Attack Gunmen Were Trained", *The Telegraph*, 12 November 2012, available at: www.telegraph.co.uk/news/worldnews/asia/pakistan/9672494/Pakistan-details-how-Lashkar-e-Taiba-2008-Mumbai-attack-gunmen-were-trained.html.
94 Wendell Cox, "Pakistan: Where the Population Bomb is Exploding", *Newgeography*, 7 February 2012, available at: www.newgeography.com/content/002940-pakistan-where-population-bomb-exploding.
95 Marco Mezzera, "Dante in Karachi: Circles of Crime in a Mega City", *Open Democracy*, 10 October 2011, available at: www.opendemocracy.net/marco-mezzera/dante-in-karachi-circles-of-crime-in-mega-city?utm_source=feedblitz&utm_medium=FeedBlitzEmail&utm_content=201210&utm_campaign=0.
96 Laurent Gayer, *Karachi: Ordered Disorder and the Struggle for the City*, Oxford University Press, Oxford, 2014, p. 3.

become a powerful driver of new policy perspectives, bringing a sense of strategy to disjoined urban responses.

Towards an urban strategic environment

Modern cities have become, more than in the ancient and medieval worlds, vulnerable to a wide range of conflicts. Whereas historians can pinpoint with relative clarity the predominant function (religious, economic, political) of a specific city in previous centuries and millennia, over time this definition has become much more blurred.[97] The large urban centres of today have become linked to the accommodation of diverse and conflicting interests.[98] This trend, linked to the previously mentioned rapid rise in global urban population, expands the challenge of managing the economic, demographic and social development of cities in a way that prevents conflict and helps in transitions to peace.

In sync with these trends, there has been a gradual shift in the way that the role of military intervention in cities is interpreted. At the same time, new perspectives from civil society have expanded the toolbox of policy tools for prevention and post-conflict transition. Driven by the frustrations that the "nation-State bias" has imposed on peace, security and development interventions in cities, different communities of practice have started to suggest new concepts and reformulate some assumptions, taking into consideration the physical, institutional and social dynamics of cities and their role in armed conflict.

Elsewhere, I have defined this interactive pattern between structures, actors and conflict as the "urban strategic environment".[99] It can provide a framework for national, regional and international institutions to strike a balance between security and development while looking at cities beyond the "silos" of peacekeeping, stabilization or UN-led conflict prevention.

On the military side, the growing call for an expanded understanding of cities (especially mega-cities) is partially driven by a changed perception of what victory means in such complex environments. This is especially true in the current context of renewed reluctance to have "boots on the ground" after long and traumatic US-led wars in Iraq and Afghanistan. Reflecting this sense of re-evaluation, authors writing on the current linkage between new moral imperatives and the conduct of conflict in cities have highlighted the difference between military and political victories – with the former undermining the achievement of the latter.[100] This concept is best encapsulated in General Rupert Smith's influential book *The Utility of Force*, in which he lays out a military conundrum that is all too relevant for cities: "politicians and soldiers are still thinking in

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97   John Reader, *Cities*, Vintage, London, 2004, p. 74.

98   *Ibid.*

99   Antônio Sampaio, "The Utility of Force in Cities: Future Challenges of US Army Urban Stabilization Efforts", in Scott Romaniuk (ed.), *The Future of US Warfare*, Ashgate, forthcoming.

100 Michael John-Hopkins, "Regulating the Conduct of Urban Warfare: Lessons from Contemporary Asymmetric Armed Conflicts", *International Review of the Red Cross*, Vol. 92, No. 878, 2010, p. 472.

terms of the old paradigm [of war] and trying to use their conventionally configured forces to that end – while the enemy and the battle have changed".[101] However impressive force may be in military terms, he adds, it may fail to achieve the required political ends.[102]

Bringing this revision closer to the context of cities, David Kilcullen writes that in order to get away from old paradigms of manoeuvre and rural-based counter-insurgency warfare, the military will have to get itself "mentally and physically out of the mountains".[103] This transition, he continues, will involve a redefinition of the military purpose from conventional clear-cut defeat of an insurgent, terrorist or State foe (which he calls "single threat" understandings of conflict) towards a "theory of competitive control" that emphasizes the blurring of classic strategic threats into a broader "non-state armed group" definition.[104] This is a further redefinition of strategic purpose in cities, embracing considerations of governance, State authority, service provision and other public goods in order to establish a system of control that draws support from local populations.

Civilian practitioners of conflict prevention, peacebuilding and reconstruction have to come to terms with the same trends. Socio-economic drivers of conflict are an underlying foundation of the security-and-development field, according to which there can be no development without security and vice versa. But the physical and social characteristics of cities interact with developmental and peacebuilding initiatives in unique ways – just like they do with military interventions.

The most dramatic example of this challenge comes from fragile and developing regions affected by flows of economic migrants, refugees and demobilized fighters flocking to cities in search of either relative security or economic opportunities. These rapid flows, as this article has mentioned, tend to set in motion processes and tensions that, if not managed, can lead to future armed conflict. The challenge is made more urgent by the fact that 80% of refugees from the world's most destructive civil war of this decade so far, in Syria, are fleeing to cities.[105]

This accelerated flow of "forced urbanization" has serious implications for conflict prevention and post-conflict transition.[106] The "nation-State bias" becomes more worrying as sub-Saharan Africa is facing one of the world's most accelerated urban population growth rates and has the highest proportion of urbanites living in slums (62%) in any region or sub-region, while at the same time concentrating several armed conflicts and the majority of UN peacekeeping missions.[107]

101 Rupert Smith, *The Utility of Force: The Art of War in the Modern World*, Penguin, London, p. 5.
102 *Ibid.*, p. 5.
103 D. Kilcullen, above note 3, p. 23.
104 *Ibid.*, p. 126.
105 David Miliband, "Cities Are at the Centre of the Syrian Refugee Crisis – So Why Are They Being Ignored?", *The Guardian*, 30 October 2015, available at: www.theguardian.com/cities/2015/oct/30/cities-are-at-the-centre-of-the-syrian-refugee-crisis-so-why-are-they-being-ignored.
106 Saskia Sassen, "When the City Itself Becomes a Technology of War", *Theory, Culture & Society*, Vol. 27, No. 6, 2010, p. 37.
107 World Bank and International Monetary Fund, *Global Monitoring Report 2013: Rural-Urban Dynamics and the Millennium Development Goals*, Washington, DC, 2013, available at: https://openknowledge.worldbank.org/handle/10986/13330.

Lessons from cities previously affected by armed conflict, also in the Middle East, reveal some of the specific pitfalls involved in conflict prevention and post-conflict processes in urban environments. A study on Beirut's reconstruction following the Lebanese Civil War (1975–90) concluded that the concentration of development and resources in the central district contributed to diminishing State legitimacy and control in peripheral areas, leading in turn to heightened control by "para-State actors" such as the extremist group Hezbollah.[108] Gaza City, which has faced years of wars and blockade by Israel, has been affected by persistent economic and infrastructural issues such as unemployment, late salaries, shortage of water and electricity outages.[109] The physical, economic and social scars of conflict on the city have had, predictably, security consequences. The convoluted cycle of destruction and reconstruction, alongside the inability to properly plan urbanization, has been cited as a factor helping Hamas to hide among the population and use Gaza City as a "nerve centre" for its military infrastructure.[110] Furthermore, the damage to the city's economy and services has provided an opportunity for black markets to thrive, encouraging potential new sources of criminal insecurity.[111] In summary, as Saskia Sassen has argued, contemporary conflicts and the resulting "forced urbanization" and internal displacement turn human flows into sources of insecurity rather than diversity.[112]

The scale of the challenge for prevention and transition from conflict in contexts such as these is, therefore, huge and increasing. At the same time, however, international organizations and private groups such as the Rockefeller Foundation have promoted the concept of urban resilience as a broad framework for cities. This has been encapsulated in the post-2015 Sustainable Development Goals, which replaced the Millennium Development Goals and introduced a specific goal (number 11) to "make cities inclusive, safe, resilient and sustainable". The inclusion of "safety" and "resilience" in the same sentence is not accidental. John de Boer, from the UN University, has pointed to "the opportunity embedded in cities" to promote not only economic development but also peace and security if resilience is strengthened.[113]

Resilience is by no means a new concept, but it has gained significant attention, and this in turn has been translated into efforts to better conceptualize its theory and practice. The term traces its roots back to the field of ecology, and has been adapted to another system, the urban, to express its potential to

108 Kathrin Höckel, *Beyond Beirut: Why Reconstruction in Lebanon Did Not Contribute to State-Making and Stability*, Occasional Paper No. 4, London School of Economics and Political Science, July 2007, p. 1, available at: www.lse.ac.uk/internationalDevelopment/research/crisisStates/download/op/OP%20Hoeckel.pdf.
109 Sultan Barakat and Omar Shaban, *Back to Gaza: A New Approach to Reconstruction*, Policy Briefing, Brookings Institution, Doha, January 2015, p. 5, available at: www.brookings.edu/~/media/research/files/papers/2015/01/12-gaza-reconstruction/english-pdf.pdf.
110 Jonathan Fighel, "Hamas in Gaza: Urban Warfare Strategy", International Institute for Counter-Terrorism, 11 January 2009, available at: www.ict.org.il/Article.aspx?ID=379.
111 S. Barakat and O. Shaban, above note 109, p. 8.
112 S. Sassen, above note 106, p. 37.
113 John de Boer, "Resilience and the Fragile City", *Stability: International Journal of Security and Development*, Vol. 4, No. 1, 2015, available at: www.stabilityjournal.org/articles/10.5334/sta.fk/.

"maintain or recover functionality" in the face of shocks and disruptions.[114] The broad scope of resilience carries the risk of rendering it *too* broad, but it can also be interpreted as a perspective that breaks silos between the neat bureaucracies. It carries, therefore, the potential to be the civilian equivalent of Kilcullen's "theory of competitive control" in the military/strategic domain, in pushing for multidimensional perspectives to bring security and development together in metropolises. In a context of growing diversity of armed threats and growing pressures on urban areas, a comprehensive approach to prevention and recovery from armed conflict in cities is not only relevant but urgent.

Conclusion

The diversification of armed conflict threats in cities has sparked a gradual rethink by the communities involved in the planning and practice of peacekeeping, security and development, which are beginning to focus on local, specifically urban settings as a unit of analysis and intervention. However, the concepts of conflict prevention and those looking at stability and peacekeeping after major conflicts have not addressed local instances of governance and their specific challenges. Instead, a long-standing "nation-State bias" continues to guide international organizations, developed countries, and civil society actors.

But a number of voices from academia and policy-making, worried by rapid urban population growth in cities, have started to push more actively for an urban prism to be attached to peace, security and development. This is a crucial challenge, as evidence from past and current wars shows that large-scale urban warfare invariably causes devastation and massive loss of life. These effects are even more relevant in the current context of rapid urban growth in the developing world.

The military thinking on cities has also started to be steered towards a multidimensional focus, guided by the assessment that armed conflict in built-up areas is now marked by non-State armed groups, resident to the urban sprawl and engaged in protracted forms of violence that often blur the distinction between war and peace, civilian and combatant, political and economic root causes. In such difficult contexts, the application of classic MOUT tactics for urban warfare has become morally and strategically challenging.

The speed and complexity of the challenges highlighted above reinforce the urgency of adding geographical specificity to preventive or post-conflict practices. Few of the instruments now available to international and national policy-makers to avoid escalation or relapse into armed conflict place emphasis on the urban form – or what I have called the urban strategic environment. The latter comprises the institutions, services, unstable peripheries and violent actors that have the potential to influence the likelihood and evolution of urban conflicts. I have touched briefly on some of the conflict-relevant elements of this

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114 Arup, *City Resilience Index: Understanding and Measuring City Resilience*, Rockefeller Foundation, 2016, p. 5.

environment; a key challenge ahead is to analyze the relationship between them and the degree to which they influence drivers of conflict.

There is ample evidence that key elements specific to the urban environment carry implications to both civilian and military authorities in the lead-up to, and the aftermath of, armed conflict. A focus on strategic local actors and social structures capable of affecting the drivers of conflict can serve as a unifying set of objectives for cooperation and multidimensional action by international, national and municipal agents.

ICRC Q&A on the issue of explosive weapons in populated areas[1]

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Hostilities in contemporary armed conflicts are increasingly being conducted in population centres, thereby exposing civilians to heightened risks of harm. This trend is only likely to continue with growing urbanization and is compounded by the fact that belligerents often avoid facing their enemy in the open, intermingling instead with the civilian population. Despite this, armed conflicts often continue to be waged with weapon systems originally designed for use in open battlefields. There is generally no cause for concern when explosive weapons with a wide impact area are used in open battlefields, but when they are used against military objectives located in populated areas they are prone to indiscriminate effects, often with devastating consequences for the civilian population.

The International Committee of the Red Cross (ICRC) continues to witness these effects first-hand as it assists the victims of armed conflicts involving the use of explosive weapons in populated areas. The ICRC has raised its concerns with the parties to such armed conflicts as part of its bilateral and confidential dialogue on the conduct of hostilities. Since 2009, it has also been publicly expressing its concerns regarding the use of explosive weapons in populated areas.

In 2011, the ICRC stated publicly for the first time its position that "due to the significant likelihood of indiscriminate effects and despite the absence of an express legal prohibition for specific types of weapons, the ICRC considers that explosive weapons with a wide impact area should be avoided in densely

populated areas".[2] In 2013, the International Red Cross and Red Crescent Movement as a whole took up this position in similar terms.[3]

The ICRC further developed its analysis of the issue in a report submitted to the 32nd International Conference of the Red Cross and Red Crescent in 2015, on which the present Q&A is based. The report built upon evidence gathered by the ICRC of the immediate and long-term effects of the use of explosive weapons in populated areas and on existing military policies and practices pertaining to warfare in populated areas. It also drew on insights that the ICRC had gained in an expert meeting on this issue which it had organized earlier in 2015.[4]

In parallel, the United Nations (UN) Secretary-General has been drawing the attention of UN member States to the need to strengthen the protection of civilians in view of the humanitarian impact of the use of explosive weapons in populated areas, as have UN agencies and non-governmental organizations.[5] A growing number of States are also acknowledging the humanitarian concerns raised by this phenomenon.[6]

Q&A on explosive weapons in populated areas

1. What are the weapons of concern?

The explosive weapons that raise humanitarian concerns when used in populated areas are those that have a "wide impact area" – or "wide-area effects".

Explosive weapons are weapons that injure or damage by means of explosive force.[7] They may have "wide-area effects" when used in populated areas due to:

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1 Based on International Committee of the Red Cross (ICRC), *International Humanitarian Law and the Challenges of Contemporary Armed Conflicts: Report*, October 2015, available at: www.icrc.org/en/document/international-humanitarian-law-and-challenges-contemporary-armed-conflicts (all internet references were accessed in August 2016). See also ICRC, "Explosive Weapons in Populated Areas", fact sheet, June 2016, available at: www.icrc.org/en/document/explosive-weapons-populated-areas-factsheet.

2 See ICRC, *International Humanitarian Law and the Challenges of Contemporary Armed Conflicts: Report*, October 2011, p. 42, available at: www.icrc.org/eng/assets/files/red-cross-crescent-movement/31st-international-conference/31-int-conference-ihl-challenges-report-11-5-1-2-en.pdf.

3 See 2013 Council of Delegates, "Weapons and International Humanitarian Law", Res. 7 (CD/13/R7), para. 4, wherein the International Red Cross and Red Crescent Movement called upon States to "strengthen the protection of civilians from the indiscriminate use and effects of explosive weapons, including through the rigorous application of existing rules of international humanitarian law, and to avoid using explosive weapons with a wide impact area in densely populated areas". Available at: www.icrc.org/eng/assets/files/red-cross-crescent-movement/council-delegates-2013/cod13-r7-weapons-and-ihl-adopted-eng.pdf.

4 ICRC, "Expert Meeting – Explosive Weapons in Populated Areas: Humanitarian, Legal, Technical and Military Aspects", Geneva, June 2015, available at: www.icrc.org/en/document/explosive-weapons-populated-areas-humanitarian-legal-technical-and-military-aspects.

5 See notably UN Security Council, Reports of the Secretary-General on the Protection of Civilians in Armed Conflict since 2009, available at: www.securitycouncilreport.org/un-documents/protection-of-civilians/; and a compilation of NGO reports available at: http://www.inew.org/learn-more-about-inew.

6 See notably a compilation of States' statements available at: www.inew.org/acknowledgements.

7 An "explosive weapon" is defined as a weapon activated by the detonation of a high-explosive substance, creating a blast and fragmentation effect. See also Kenneth Cross, Ove Dullum, Marc Garlasco and N. R. Jenzen-Jones, *Explosive Weapons in Populated Areas: Technical Considerations Relevant to Their Use and Effects*, Special Report, Armament Research Services, Perth, 2015, available at: www.icrc.org/en/document/explosive-weapons-populated-areas-use-effects.

- the large destructive radius of the individual munition used, i.e., its large blast and fragmentation range or effect, such as large bombs, large-calibre mortars and rockets, large guided missiles, and heavy artillery projectiles;
- the lack of accuracy of the delivery system, typically indirect-fire weapons where the target is not observed by the platform firing the weapon, such as mortars, rockets, artillery (especially when using unguided munitions) and unguided air-delivered bombs; or
- the weapon system being designed to deliver multiple munitions over a wide area, such as multiple rocket-launcher systems.

In this respect, the issue of explosive weapons in populated areas concerns not one single weapon but a range of different conventional weapon systems, and consideration of the circumstances of their use, including the typical vulnerabilities of civilians living in populated areas, is needed.

Insofar as improvised explosive devices may fall into one of the three general categories of explosive weapons listed above, they are also a cause for concern when used in populated areas.

Explosive weapons that are already prohibited or otherwise limited as such by international humanitarian law (IHL) treaties, such as anti-personnel mines or cluster munitions, are outside of the scope of the discussion. Also excluded are issues related to explosive remnants of war, which, although they pose a significant threat to civilians and result from the decision to use explosive weapons, are governed by a specific treaty.[8]

2. How are "populated areas" defined?

Simply put, the terms "densely populated areas" and "populated areas" should be understood as synonymous with "concentration of civilians", the latter being the only one of these terms defined by IHL treaties, as in "a city, town, village or other area containing a similar concentration of civilians or civilian objects".[9]

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8   See Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction, 2056 UNTS 211, 18 September 1997 (entered into force 1 March 1999); Convention on Cluster Munitions, 2688 UNTS 39, 30 May 2008 (entered into force 1 August 2010); Convention on Certain Conventional Weapons (CCW), Protocol II on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices, 2048 UNTS 93 (entered into force 3 December 1998) as amended on 3 May 1996; Protocol V on Explosive Remnants of War, 2399 UNTS 100, 28 November 2003 (entered into force 12 November 2006).

9   See Article 51(5)(a) of Additional Protocol I (AP I) and Articles 3(9) and 7(3) of CCW Protocol II, above note 8. The term "concentration of civilians" is defined, in Article 1(2) of CCW Protocol III on Prohibitions or Restrictions of the Use of Incendiary Weapons, as "any concentration of civilians, be it permanent or temporary, such as in inhabited parts of cities, or inhabited towns or villages, or as in camps or columns of refugees or evacuees, or groups of nomads".

3. What are the humanitarian consequences of the use of explosive weapons in populated areas?

Warfare in populated areas using explosive weapons that have a wide impact area exacts a terrible toll on civilians. Recent armed conflicts have confirmed that the use of such weapons is a major cause of civilian death and injury and of destruction and damage to civilian residences and critical infrastructure, with consequent disruption to essential services such as health care, water distribution and other services necessary for the survival of the civilian population.[10]

In terms of effects on people's health, these are not limited to death, physical injury and long-term disability, but also include the long-term impact on mental well-being. The use of explosive weapons in populated areas also affects the ability of health-care facilities and services to operate, to cope with the rapid and simultaneous influx of numerous wounded people and the particular injuries they present, and to provide adequate care. The foregoing effects are accentuated in contexts where the use of explosive weapons is protracted, with the consequent decline of essential services over time and serious risks for public health.[11] Often civilians have no choice but to leave, increasing the number of displaced people.

4. What are the IHL rules applicable to the use of explosive weapons in populated areas?

In view of the humanitarian consequences outlined above, and as previously stated, the ICRC is of the view that explosive weapons with a wide impact area should not be used in densely populated areas due to the significant likelihood of indiscriminate effects, meaning that their use against military objectives located in populated areas is likely to fall foul of the IHL rules prohibiting indiscriminate and disproportionate attacks.

Indiscriminate attacks are those of a nature to strike military objectives and civilians or civilian objects without distinction, notably because they employ means or methods of warfare that cannot be directed at a specific military objective or the effects of which cannot be limited as required by IHL.[12] Disproportionate attacks and area bombardment are treated as particular forms of indiscriminate attacks. The principle of proportionality prohibits attacks "which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated".[13] Area bombardment is defined as "an attack by bombardment by any methods or means which treats as a single

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10 For more on the ICRC's approach to urban services during protracted armed conflict, see the interview with Jean-Philippe Dross in this issue of the *Review*.

11 See ICRC, *Urban Services During Protracted Armed Conflict*, Geneva, October 2015, available at: www.icrc. org/en/download/file/13438/icrc-002-42491.pdf.

12 AP I, Art. 51(4). This is a rule of customary IHL in both international and non-international armed conflicts.

13 AP I, Art. 51(5)(b).

military objective a number of clearly separated and distinct military objectives located in a city, town, village or other area containing a similar concentration of civilians or civilian objects".[14] The foregoing rules must be respected by the parties to an armed conflict in all circumstances,[15] even if alternative, more discriminate weapons or tactics are not available to them.

In addition to these obligations, the IHL rule of precautions in attack requires the parties to an armed conflict, in the conduct of their military operations, to take constant care to spare the civilian population, individual civilians and civilian objects. This rule notably requires "those who plan or decide upon an attack" to take "all feasible precautions in the choice of means and methods of attack with a view to avoiding, and in any event to minimizing, incidental loss of civilian life, injury to civilians and damage to civilian objects".[16] When conducting hostilities in populated areas, the rule of precautions may require the parties to choose the most precise weapon available, or consider alternative weapons and/or tactics.

5. How can these rules be implemented in military operations?

The assessment of whether an attack is indiscriminate or disproportionate, and whether all feasible precautions have been taken, must be based not on hindsight but rather on the perspective of the commander based on the information available to him/her at the time of the attack. Such information includes the foreseeable effects of the weapons at his/her disposal in view of their inherent characteristics, as well as the circumstances of their use, including the physical environment in which the military objective is located and the vulnerability of the surrounding civilian population and civilian objects.

Of these factors, the choice of weapon and the manner in which it will be used are those over which the commander has the greatest control. In this regard, the variables related to the choice and use of weapon that the commander can manipulate to respect the above-mentioned IHL rules include the type and size of the warhead (munition), the type of fuse, the delivery system and the distance from which the weapon is launched, as well as the angle and timing of the attack. The technical skills of the armed forces in the selection and use of weapons gained through training are also critical factors that will influence the outcome of an attack.[17] Nonetheless, even after taking all such measures and precautions,

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14 AP I, Art. 51(5)(a). This is a rule of customary IHL in both international and non-international armed conflicts.
15 See AP I, Art. 51(1).
16 AP I, Art. 57(2)(a)(ii). This is a rule of customary IHL in both international and non-international armed conflicts. Feasible precautions are described in Article 3(10) of CCW Protocol II, above note 8, as those that are "practicable or practically possible taking into account all circumstances ruling at the time, including humanitarian and military considerations".
17 For the range of factors regarding weapons selection and use, see ICRC, above note 4, pp. 5–6, 24–30. See also Yves Sandoz, Christophe Swinarski and Bruno Zimmermann (eds), *Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949*, ICRC and Martinus Nijhoff, Geneva, 1987 (Commentary on the Additional Protocols), para. 2212.

certain explosive weapons may be prone to causing significant incidental immediate and long-term effects on civilians and civilian objects when used in populated areas.

Warfare in densely populated areas, where military objectives are intermingled with protected persons and objects, represents an important operational challenge for armed forces.[18] A military commander has the responsibility to minimize the incidental effects on civilians of an attack, and such a responsibility is heightened in an environment where civilians and civilian infrastructure are the main features of the theatre of operations. This holds equally true when the opposing party deliberately intermingles with civilians in order to shield its military activities – unlawful behaviour that nonetheless does not relieve the attacking party of its own obligations under IHL. Urban warfare thus entails a more demanding analytical process during the planning phase, as well as complex decision-making in real-time situations. As seen above, the military commander has a larger number of factors to take into account than when conducting hostilities in open areas.

Even more so than in open areas, an attacking party's ability to respect IHL in populated areas depends on the means and methods of warfare that it chooses to use, or not to use, taking into account their foreseeable effects in such environments, including their reverberating effects. Though some military practice, such as "collateral damage estimation" methodologies and "minimum safe distances", as well as lessons learned from post-attack "battle damage assessments" and "after action reviews", may help to minimize incidental harm to civilians, it remains unclear how these integrate the requirements of the rules of IHL discussed above.

What seems certain is that thorough training of armed forces in the selection and use of means and methods of warfare in populated areas, including on the technical capabilities of the weapons at their disposal, is critical to avoiding or minimizing incidental harm to civilians in this environment. Moreover, specific targeting directives applicable to the use of certain explosive weapons in populated areas may be required to ensure compliance with IHL. Yet only a few armed forces are known to train specifically in urban warfare, or to otherwise apply specific limitations on the choice and use of explosive weapons in populated areas for the purpose of avoiding or minimizing incidental civilian harm.

6. What is the main challenge in relation to the prohibition of indiscriminate attacks?

The prohibition of indiscriminate attacks takes into account the fact that means and methods of warfare which can be used perfectly legitimately in some situations could, in other circumstances (including due to the manner in which they are used), be of a nature to strike military objectives and civilians and civilian objects without distinction.[19] Warfare in populated areas is certainly a situation that may

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18 For further discussion of the military perspective on civilian protection in urban warfare, see the article by Nathalie Durhin in this issue of the *Review*.
19 See Commentary on the Additional Protocols, above note 17, para. 1962.

render indiscriminate explosive weapons that could be lawfully used in other circumstances, such as an open battlefield.

The prohibition of indiscriminate attacks includes those that employ a method or means of delivery which cannot be directed at a specific military objective.[20] It is unclear what States consider to be the degree or standard of accuracy of a weapon that would be acceptable under this rule, generally or in a given operational situation. At any rate, any such standard of accuracy must be consistent with the general aim of protecting civilians from the effects of hostilities.

Still, the inherent inaccuracies of certain types of explosive weapon systems – such as many of the artillery, mortar and multiple rocket-launcher systems in use today, especially when using unguided munitions, as well as unguided air-delivered bombs – raise serious concerns under the prohibition of indiscriminate attacks when used in populated areas. While increasing the accuracy of delivery systems would help reduce the weapons' wide-area effects in populated areas, accuracy could be obviated by the use of large-calibre munitions – i.e., munitions that have a large destructive radius relative to the size of the military objective – which might still be in violation of IHL.

The interpretation of the prohibition of indiscriminate attacks may become more demanding with the development of new means and methods of warfare, notably with advances in precision weaponry. For example, the meaning of "clearly separate and distinct" military objectives in the prohibition of area bombardment is understood to mean a distance at least sufficiently large to permit the individual military objectives to be attacked separately.[21] This understanding implies that the practical application of the prohibition of area bombardment, and by extension of the prohibition of indiscriminate attacks, could evolve based on the development of new weapons capabilities.

7. What is the main challenge in relation to the prohibition of disproportionate attacks?

The most visible effects of an attack using explosive weapons in populated areas are the immediate (or "direct") civilian deaths and injuries and damage to civilian objects caused by the weapons' blast and fragmentation effects. Less visible, but equally devastating, are the reverberating effects (also referred to as the "indirect", "knock-on" or "long-term" effects) of the attack, as consequences of incidental damage to certain civilian objects. For example, incidental damage to civilian homes is likely to cause the displacement of civilians, while incidental

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20 See AP I, Art. 51(4)(b). Article 3(8) of CCW Protocol II, above note 8, includes, in its definition of "indiscriminate use" of mines, booby-traps and other devices, any placement of such weapons "which employs *a method or means of delivery* which cannot be directed at a specific military objective" (emphasis added).

21 See Commentary on the Additional Protocols, above note 17, para. 1975: "When the distance separating two military objectives is sufficient for them to be attacked separately, taking into account the means available, the rule should be fully applied. However, even if the distance is insufficient, excessive losses that might result from the attack should be taken into account."

damage to hospitals is likely to cause the disruption of medical services, which in turn is likely to lead to the deaths of patients. Critical civilian infrastructure, such as vital water and electrical facilities and supply networks, is particularly fragile and vulnerable to the incidental effects of explosive weapons. The interconnectedness of the essential services that depend on critical infrastructure is such that disruption to one service will have knock-on effects on the other services. Thus, incidental damage to critical infrastructure can cause severe disruption to essential services on which the civilian population depends for its survival, such as health care, energy and water supplies and waste management, leading to the spread of disease and further deaths.

The question that arises is whether the reverberating effects of an attack using explosive weapons in populated areas must be taken into account by the attacker in assessing the expected incidental civilian casualties and damage to civilian objects as required under the IHL rules of proportionality and precautions in attack, recalled above. While acknowledging that it is both impractical and impossible for commanders to consider all possible effects of an attack, the ICRC considers that those reverberating effects which are foreseeable in the circumstances must be taken into account.

While there is support for this view, there remains uncertainty regarding which reverberating effects of an attack are "foreseeable". Although, as explained above, this assessment is context-specific, the ICRC submits that it is framed in an objectivized way by what is foreseeable based on the standard of a "reasonably well-informed person in the circumstances [of the attacker], making reasonable use of the information available to him or her".[22] In this respect, it is submitted that those who plan and decide upon an attack have an obligation to do everything feasible to obtain information that will allow for a meaningful assessment of the foreseeable incidental effects on civilians and civilian objects. Moreover, what is objectively foreseeable by a commander in a given case must be informed by past experiences and lessons learned from his/her country's armed forces. It should also take into account the ever-growing experience of other armed forces in urban warfare, when available. In other words, as the understanding of the reverberating effects of the use of explosive weapons in populated areas increases, this knowledge informs future assessments and decisions under the rules of proportionality and precautions in attack.[23]

It is unclear how armed forces integrate the obligation to take into account the foreseeable reverberating incidental effects on civilians and civilian objects into their military policies and practice, for example in collateral damage estimates. Based on the effects of explosive weapons in populated areas, namely the extensive civilian harm being witnessed today, there is significant doubt that

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22 International Criminal Tribunal for the former Yugoslavia, *The Prosecutor v. Galić*, Case No. IT-98-29, Judgment, 5 December 2003, para. 58.

23 For further discussion of the reverberating effects of explosive weapons when used in populated areas, see the article by Isabel Robinson in this issue of the *Review*.

reverberating effects are sufficiently factored in as required by the rules of proportionality and precautions in attack.

8. Are the rules of IHL sufficient to regulate the use of explosive weapons in populated areas?

Although there is no dispute that any use of explosive weapons in populated areas must comply with the above IHL rules, there are divergent views on whether these rules sufficiently regulate the use of such weapons, or whether there is a need to clarify their interpretation or to develop new standards or rules. Based on the effects of explosive weapons in populated areas being witnessed today, there are serious questions regarding how the parties using such weapons are interpreting and applying IHL. Divergent practice of militaries, and contrasting views among experts and in the case law of international criminal tribunals regarding what is or is not legally acceptable, may point to ambiguities in IHL and the need for States to clarify their interpretation of the relevant IHL rules or to develop clearer standards in order to effectively protect civilians.

In any respect, the prohibition of indiscriminate attacks and the rules of proportionality and precautions in attack, each of which strikes a careful balance between considerations of military necessity and of humanity, were developed by States with the overarching objective of protecting civilians and civilian objects against the effects of hostilities. Any challenges that may arise in their interpretation and application to the use of explosive weapons in populated areas must be resolved with this overarching objective in mind.

A better knowledge of existing military policy and practice, and more clarity on how States interpret and apply the relevant rules of IHL to the use of explosive weapons in populated areas, would help to inform debates about this important humanitarian issue, foster a possible convergence of views, and assist parties to armed conflicts who endeavour in good faith to comply with the law. Ultimately, this will lead to better protection of civilians in populated areas.

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Proportionality and precautions in attack: The reverberating effects of using explosive weapons in populated areas

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Abstract

During an armed conflict, the use of explosive weapons with wide area effects in populated areas has a devastating impact on civilians. Less visible than the direct effects of explosive weapons, but equally devastating, are the reverberating effects of the use of explosive weapons in populated areas. While there is growing consensus that parties to an armed conflict are legally obliged to take into account the reasonably foreseeable reverberating effects of an attack, particularly for the purposes of the rules on proportionality and precautions in attack, the precise scope of this obligation remains unclear. After setting out the legal arguments in support of the position that reasonably foreseeable reverberating effects must be taken into account, this article goes on to examine how such effects should be evaluated and how they must be avoided or minimized.

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Introduction

During armed conflict, the use of explosive weapons with wide area effects[1] in populated areas[2] has a devastating impact on civilians. Most visible are the direct blast and fragmentation effects of explosive weapons, which kill and injure civilians and damage civilian objects including civilian houses. Less visible, but equally devastating, are the reverberating effects of the use of explosive weapons in populated areas, meaning those effects "that are not directly and immediately caused by the attack, but are nevertheless the product thereof".[3] When civilian housing and essential infrastructure are damaged or destroyed, civilians are affected in a number of ways, especially when populated areas sustain attacks over a long period of time.[4] Civilians may be displaced, electricity may be temporarily or permanently disabled, health services may be weakened, wastewater collection and treatment may be reduced, and the accessibility, quality and quantity of water supplies may deteriorate.[5] In many contexts, the reverberating effects of an attack, particularly one that disables the national electricity system, may far outweigh the immediate civilian casualties caused by the attack.[6]

While international debate concerning the legal obligation to take into account the reverberating effects of an attack has evolved significantly over the last ten years – most recently in the context of cyber-warfare[7] – and enjoys

1   Explosive weapons with wide area effects include: (1) weapons that employ an individual munition with a large destructive radius – i.e., with large blast and fragmentation range or effect (such as large bombs or missiles); (2) weapon systems with inaccurate delivery systems (such as unguided indirect fire weapons, including artillery and mortars); and (3) weapon systems that are designed to deliver multiple munitions over a wide area (for example, multi-barrel rocket launchers).

2   "Populated area" is synonymous with "concentration of civilians", which is defined under international humanitarian law (IHL) as "a city, town, village or other area containing a similar concentration of civilians or civilian objects". See Protocol Additional (I) to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts, 1125 UNTS 3, 8 June 1977 (entered into force 7 December 1978) (AP I), Art. 51(5)(4). See also ICRC, *International Humanitarian Law and the Challenges of Contemporary Armed Conflicts*, report prepared by the ICRC for the 32nd International Conference of the Red Cross and Red Crescent, Geneva, 2015 (2015 Challenges Report), p. 49.

3   Michael N. Schmitt, "Wired Warfare: Computer Network Attack and *Jus in Bello*", *International Review of the Red Cross*, Vol. 84, No. 846, 2002, p. 392.

4   See, for example, ICRC, *Urban Services during Protracted Armed Conflict: A Call for a Better Approach to Assisting Affected People*, Geneva, 2015 (Urban Services Report), pp. 21–32.

5   *Ibid.*

6   See, for example, Walid Doleh, Warren Piper, Abdel Qamhieh and Kamel al Tallaq, *Health and Welfare in Iraq After the Gulf Crisis: An In-depth Assessment*, report by the International Study Team, Electrical Facilities Survey, October 1991; William Arkin, "Tactical Bombing of Iraqi Forces Outstripped Value of Strategic Hits, Analyst Contends", *Aviation Week and Space Technology*, 27 January 1992, cited in James Crawford, "The Law of Noncombatant Immunity and the Targeting of National Electrical Power Systems", *Fletcher Forum of World Affairs*, Vol. 21, No. 2, 1997, p. 110.

7   See, for example, Cordula Droege, "Get Off My Cloud: Cyber Warfare, International Humanitarian Law and the Protection of Civilians", *International Review of the Red Cross*, Vol. 94, No. 886, 2012, pp. 572 ff.

increasing acceptance by commentators[8] and States,[9] there is still no consensus on the scope of this obligation as it applies to the rules on proportionality and precautions in attack.[10] This article seeks to shed light on this grey area in the law, particularly as it relates to the use of explosive weapons in populated areas. More precisely, the article examines the parameters of the obligation under the rules on proportionality and precautions in attack, including the extent of reverberating effects that must be taken into account, how reverberating effects should be evaluated, and how such effects must be avoided or minimized. While the use of explosive weapons in populated areas is not explicitly prohibited under international humanitarian law (IHL), this article will demonstrate that such use might violate the rule on proportionality and certain precautionary requirements, if the reasonably foreseeable reverberating effects of the attack are not taken into account.[11]

8 Marco Sassòli and Lindsey Cameron, "The Protection of Civilian Objects: Current State of the Law and Issues *de Lege Ferenda*", in Natalino Ronzitti and Gabriella Venturini (eds), *The Law of Air Warfare: Contemporary Issues*, Eleven International Publishing, Utrecht, 2006, p. 65; Michael N. Schmitt and Eric W. Widmar, "'On Target': Precision and Balance in the Contemporary Law of Targeting", *Journal of National Security Law and Policy*, Vol. 7, No. 3, 2014; Peter Rowe, "Kosovo 1999: The Air Campaign – Have the Provisions of Additional Protocol I Withstood the Test?", *International Review of the Red Cross*, Vol. 82, No. 837, 2000, p. 152; Michael N. Schmitt (ed.), *Tallinn Manual on the International Law Applicable to Cyber Warfare*, Cambridge University Press, Cambridge, March 2013 (Tallinn Manual), p. 160 (prepared by the International Group of Experts at the Invitation of the NATO Cooperative Cyber Defence Centre of Excellence). It should be noted that the *Commentary on the Harvard Humanitarian Policy and Conflict Research Manual on International Law Applicable to Air and Missile Warfare*, Harvard University, 2010 (Commentary on the AMW Manual), indicates that "the issue is not entirely settled" (M. N. Schmitt and E. W. Widmar, "'On Target'", above, p. 405). See also *Harvard Humanitarian Policy and Conflict Research Manual on International Law Applicable to Air and Missile Warfare*, Harvard University, 2009 (AMW Manual). However, according to Schmitt – who was part of the process for both the Tallinn Manual and the AMW Manual – the Tallinn Manual is the better view. See Michael N. Schmitt, "Rewired Warfare: Rethinking the Law of Cyber Attack", *International Review of the Red Cross*, Vol. 96, No. 893, 2014, pp. 202–205.

9 ICRC, *Explosive Weapons in Populated Areas: Humanitarian, Legal, Technical and Military Aspects*, Geneva, 2015 (Expert Meeting Report), p. 23 (this report is a product of the Expert Meeting held in Chavannes-de-Bogis, Switzerland, on 24–25 February 2015); US Department of Defence, *Law of War Manual*, 2015 (US Law of War Manual), p. 342, note 158, citing the US Air Force Pamphlet, 1976; US Department of the Army, *Counterinsurgency*, FM 3-24/ MCWP 3-33.5, 2006 (US Counterinsurgency Manual), § 7–36; UK Ministry of Defence, *The Joint Service Manual of the Law of Armed Conflict*, JSP 383, 2004, amended in 2013 (UK Joint Service Manual), para. 5.33.4; "Response to the IHL Questionnaire from Switzerland", CCW/GGE/XI/WG.1/WP.13, 3 August 2005, § 15; "Response to the IHL Questionnaire from Norway", CCW/GGE/XI/WG.1/WP.5, 29 July 2005, § 19; "Response to the IHL Questionnaire from Austria", CCW/GGE/XI/WG.1/WP.14, 4 August 2005, § 11; "Response to the IHL questionnaire from Czech Republic", CCW/GGE/XIII/WG.1/WP.2, 10 February 2006; "Response from Sweden to Document CCW/GGE/X/WG.1/WP.2", CCW/GGE/XI/WG.1/WP.8, 29 July 2005; Statement by Ireland on the McCormack Report, CCW Thirteenth Meeting of the Group of Government Experts on ERW, March 2006, available at: www.unog.ch/__80256ee600585943.nsf/ (httpPages)/eaef687b33e754b8c12573cf0074929e?OpenDocument&ExpandSection=1 (all internet references were accessed in October 2016).

10 Yoram Dinstein, *The Conduct of Hostilities under the Law of International Armed Conflict*, 3rd ed., Cambridge University Press, Cambridge, 2016, p. 159; Michael N. Schmitt, "The Law of Targeting", in Elizabeth Wilmshurst and Susan Breau (eds), *Perspectives on the ICRC Study on Customary International Humanitarian Law*, Cambridge University Press, Cambridge, 2007, pp. 131, 159.

11 While the foreseeable reverberating effects of an attack using explosive weapons in populated areas are also relevant to the prohibition against indiscriminate attack, this article will focus solely on the relevance of reverberating effects in the interpretation and application of the rules on proportionality and precautions

The article is structured in four parts. The first part presents the IHL rules on the conduct of hostilities, while the second part explores the legal arguments in support of the position that foreseeable reverberating effects must be taken into account for the purposes of the rule on proportionality and some of the rules relating to precautions in attack. The third part examines the scope of the obligation to take into consideration foreseeable reverberating effects, including the notion of "foreseeability" and the standard of care imposed by the obligation. The article concludes by analyzing the practical measures that must be taken to assess and minimize the foreseeable reverberating effects of an attack, as required by the obligation to take all feasible precautions in attack.

IHL rules on the conduct of hostilities

Like other means of warfare, the use of explosive weapons in populated areas is regulated by IHL rules on the conduct of hostilities, namely, the rules on distinction, proportionality and precautions in attack. These rules, as set out in treaty and customary IHL, are applicable in both international and non-international armed conflicts.[12]

The rule of distinction prescribes that parties to an armed conflict must at all times distinguish between civilians and civilian objects on the one hand, and military objectives on the other;[13] civilians and civilian objects are protected and must not be the object of attack.[14] The prohibition on indiscriminate attacks which flows from the rule of distinction prohibits attacks not directed at a specific military objective, attacks which employ means or methods of combat that cannot be directed at a specific military objective, and attacks which employ means or methods of combat the effects of which cannot be limited as required by IHL and consequently, in each such case, are of a nature to strike military objectives and civilians or civilian objects without distinction.[15] The prohibition of indiscriminate attacks also entails the prohibition of disproportionate attacks.[16] According to this prohibition, the expected incidental loss of civilian life, injury to civilians and damage to civilian objects, or combination thereof (hereafter referred to as "incidental damage"), of an attack must not be excessive in relation to the concrete and direct military advantage anticipated.[17] While it is argued

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in attack. The relevance of the foreseeable reverberating effects of a cyber-attack in relation to the prohibition against indiscriminate attacks, among other rules, is referred to in the 2015 Challenges Report, above note 2, pp. 42–43.

12 AP I, Arts 48(1), 51(1), 51(2), 51(5)(b), 57; Jean-Marie Henckaerts and Louise Doswald-Beck (eds), *Customary International Humanitarian Law*, Vol. 1: *Rules*, Cambridge University Press, Cambridge, 2005 (ICRC Customary Law Study), Rules 1, 7, 14, 15–21.

13 AP I, Art. 48(1); ICRC Customary Law Study, above note 12, Rules 1, 7.

14 AP I, Arts 51(2), 52(1); ICRC Customary Law Study, above note 12, Rules 1, 7.

15 AP I, Art. 51(4); ICRC Customary Law Study, above note 12, Rules 11, 12.

16 Under AP I, Article 51(5), area bombardment and disproportionate attacks are treated as particular forms of indiscriminate attacks.

17 AP I, Art. 51(5)(b); ICRC Customary Law Study, above note 12, Rule 14. The rule on proportionality in attack is also found in Article 3(8)(c) of the Protocol on Prohibitions on the Use of Mines, Booby-Traps

that an object which serves both civilian and military functions ("dual-use object") is to be regarded as a military objective in its entirety,[18] there is considerable support from States[19] and commentators[20] for the idea that

> the destruction of the civilian part of this object, or more generally, the fact that the attack puts an end to its use by civilians, as well as the reverberating effects of such damage forms part of the incidental damage that must be taken into account under the proportionality principle.[21]

In order to ensure compliance with the rules of distinction and proportionality, and to ensure that constant care is taken in the conduct of military operations to spare civilians and civilian objects, IHL requires parties to an armed conflict to take precautions in attack. Precautionary requirements entail doing everything feasible

and Other Devices as amended on 3 May 1996 (Amended Mines Protocol) annexed to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons which may be deemed to be Excessively Injurious or to have Indiscriminate Effects, Geneva, 3 May 1996 (CCW), and Rule 102(b) of the *San Remo Manual on International Law Applicable to Armed Conflicts at Sea*, 12 June 1994, regarding naval blockades. See Louise Doswald-Beck (ed.), *San Remo Manual on International Law Applicable to Armed Conflicts at Sea*, Cambridge University Press, Cambridge, 1995, p. 179. It should be noted that violation of the rule on proportionality in attack constitutes a war crime in both international and non-international armed conflicts. See AP I, Art. 85(3)(b); Rome Statute of the International Criminal Court, UN Doc. A/CONF. 183/9, 17 July 1998 (entered into force 1 July 2002), Art. 8(2)(b)(iv); ICRC Customary Law Study, above note 12, Rule 156.

18 Agnieszka Jachec-Neale, *The Concept of Military Objectives in International Law and Targeting Practice*, Routledge, New York, 2016, p. 69; William H. Boothby, *The Law of Targeting*, Oxford University Press, Oxford, 2012, pp. 104–105.

19 See Royal Army of the Netherlands, *The Humanitarian Law of War: A Manual*, VS 27-41, unofficial English translation available at the ICRC library, September 2005, para. 0546: "When attacking mixed objects …, it must be carefully considered whether the military advantage expected from eliminating the military element of the mixed objective outweighs the damage done to the civilian population, by damaging or destroying the civilian element of the mixed object or ending its civilian function"; CarrieLyn D. Guymon (ed.), *US Digest of United States Practice in International Law 2014*, US Department of State, Office of the Legal Adviser, 2014, p. 737, where it is stated: "When undertaking a proportionality evaluation, parties to an armed conflict should consider the risk of unintended or cascading effects on civilians and civilian objects in launching a particular cyber attack, as well as the harm to civilian uses of dual-use infrastructure that may be the target of an attack"; US Joint Chiefs of Staff, *Joint Targeting*, Joint Publication 3–60, 31 January 2013 (US Joint Targeting Manual), p. A-5, mentions that: "If the attack is directed against dual-use objects that might be legitimate military targets but also serve a legitimate civilian need (e.g., electrical power or telecommunications), then this factor must be carefully balanced against the military benefits when making a proportionality determination." See also Department of Homeland Security and US Coast Guard, Department of the Navy, Office of the Chief of Naval Operations and Headquarters, *The Commander's Handbook on the Law of Naval Operations*, NWP 1-14M, July 2007 (US Naval Handbook), para. 8.3, and the discussion of coalition practice in the Gulf War in Christopher Greenwood, "Customary International Law and the First Geneva Protocol of 1977 in the Gulf Conflict", in Peter Rowe (ed.), *The Gulf War 1990–91 in International and English Law*, Routledge, London, 1993, pp. 63 ff., 73, 79.

20 Tallinn Manual, above note 8, p. 135; W. H. Boothby, above note 18, pp. 104–105; Henry Shue and David Wippman, "Limiting Attacks on Dual-Use Facilities Performing Indispensable Civilian Functions", *Cornell International Law Journal*, Vol. 35, No. 3, 2002, p. 565; Noam Lubell, "Current Challenges with Regard to the Notion of Military Objective – Legal and Operational Perspectives", in *Conduct of Hostilities: The Practice, the Law and the Future*, International Institute of Humanitarian Law, September 2014, p. 84; M. N. Schmitt and E. W. Widmar, above note 8, p. 393; M. Sassòli and L. Cameron, above note 8, para. 57 ff.

21 Laurent Gisel, "Relevant Incidental Harm for the Proportionality Principle", *Urban Warfare*, Proceedings of the 16th Bruges Colloquium, 15–16 October 2015, p. 123.

to verify that the target is a military objective;[22] taking all feasible precautions in the choice of means and methods of attack, with a view to avoiding, and in any event minimizing, the expected incidental damage;[23] refraining from launching an attack that may be expected to violate the rule on proportionality;[24] and cancelling or suspending an attack if it becomes apparent that the target is not a military objective or is subject to special protection, alternatively, that the attack may be expected to violate the rule on proportionality.[25] The application of these rules, which are the most relevant ones in relation to the use of explosive weapons in populated areas, will necessarily be based on *ex ante* information[26] – that is, the information that is reasonably available to the attacking party at the time of the attack – and not on hindsight.[27]

As is clear from the elaboration of these basic conduct of hostilities rules, both the rule of proportionality and several of the precautionary rules require an assessment of the expected incidental damage arising from an attack.[28] While many military manuals include the notion of incidental damage, the term has been defined in different ways.[29] At its core, it refers to damage to civilians and civilian objects that is incidental, collateral or secondary to an attack against a lawful target. In the view of the International Committee of the Red Cross (ICRC) and others, incidental damage also includes the foreseeable reverberating effects of an attack,[30] otherwise known as "knock-on" or "indirect"

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22 AP I, Art. 57(2)(a)(i); ICRC Customary Law Study, above note 12, Rule 16.
23 AP I, Art. 57(2)(a)(ii); ICRC Customary Law Study, above note 12, Rule 15.
24 AP I, Art. 57(2)(a)(iii); ICRC Customary Law Study, above note 12, Rules 17 and 18.
25 AP I, Art. 57(2)(b); ICRC Customary Law Study, above note 12, Rule 19. Note that Rule 19 does not refer to objects "that are subject to special protection". Additional precautionary requirements are set out in AP I, Articles 57(2)(c), 57(3) and 57(4), and ICRC Customary Law Study, above note 12, Rules 20 and 21.
26 Commentary to ICRC Customary Law Study, above note 12, Rule 15.
27 Knut Dörmann, "Obligations of International Humanitarian Law", *Military and Strategic Affairs*, Vol. 4, No. 2, 2012, p. 12.
28 There are four such rules: (1) the rule on proportionality; (2) the obligation to take feasible precautionary measures in the choice of means and methods of attack in order to avoid and in any event minimize "expected" incidental damage; (3) the obligation to refrain from launching an attack that may be expected to violate the rule on proportionality, including to do everything feasible to assess whether the attack may be expected to violate this rule; and (4) the obligation to cancel or suspend an attack if it becomes apparent that the attack may be expected to violate the rule on proportionality.
29 See ICRC Customary Law Study, above note 12, Rule 14. See also Y. Dinstein, above note 10, p. 150.
30 2015 Challenges Report, above note 2, pp. 42, 52; Expert Meeting Report, above note 9, p. 21; ICRC, *International Humanitarian Law and the Challenges of Contemporary Armed Conflicts*, report prepared by the ICRC for the 28th International Conference of the Red Cross and Red Crescent, Geneva, 2003, p. 12; ICRC, *Existing Principles and Rules of International Humanitarian Law Applicable to Munitions that May Become Explosive Remnants of War*, Working Paper submitted to the CCW Group of Government Experts, CCW/GGE/XI/WG.1/WP.7, Geneva, 28 July 2005. See also K. Dörmann, above note 27, p. 17; Maya Brehm, "International Humanitarian Law and the Protection of Civilians from the Effects of Explosive Weapons", in Caroline Harvey, James Summers and Nigel D. White (eds), *Contemporary Challenges to the Laws of War: Essays in Honour of Professor Peter Rowe*, Cambridge University Press, Cambridge, 2014, p. 254; Rebecca J. Barber, "The Proportionality Equation: Balancing Military Objectives with Civilian Lives in the Armed Conflict in Afghanistan", *Journal of Conflict & Security Law*, Vol. 15, 2010, p. 480; Cordula Droege and Marie-Louise Tougas, "The Protection of the Natural Environment in Armed Conflict – Existing Rules and Need for Further Legal Protection", *Nordic Journal of International Law*, Vol. 82, No. 1, 2013, p. 30; Marco Roscini, *Cyber Operations and the Use of Force in International Law*, Oxford University Press, Oxford, 2014, p. 221.

effects.[31] According to this position, commanders are not only obliged to take into account the direct incidental damage that may be expected from an attack, but must also consider the foreseeable reverberating effects of the attack. These effects form part of the incidental damage that must be weighed up against the anticipated military advantage under the rules of proportionality and precautions in attack, and which must be taken into consideration when taking all feasible precautions in the choice of means and methods of an attack in order to avoid, and in any event minimize, the expected incidental damage.

Legal obligations regarding the reverberating effects of an attack

The legal obligation to take into account the reverberating effects of an attack derives from rules in Additional Protocol I (AP I) on proportionality and precautions, interpreted in line with the rules on treaty interpretation. In addition, there is a growing body of State practice which demonstrates increasing acceptance of this obligation.

Treaty interpretation

As with all treaty rules, the AP I rules on proportionality and precautions in attack must be interpreted in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context, and in light of the object and purpose of the treaty.[32] In this regard, there are a number of arguments to support the view that the "expected" incidental damage to civilians should be interpreted so as to include the reverberating effects of an attack.

Textual interpretation

First, the phrase "may be expected" in Articles 51(5)(b) and 57(2)(a)(iii) and (b) of AP I is not explicitly limited in either time or space. Indeed, the 1974–77 Diplomatic Conference expressly rejected attempts to confine incidental damage to those in the immediate vicinity of the military objective.[33] There is accordingly no reason, based on the text of the provisions, to limit the assessment under the rules on proportionality and precautions in attack to the immediate or direct effects of an attack. This argument is articulated by Droege, who states that "considering the wording of Article 51(5)(b) of Additional Protocol I ('may be expected'), it is reasonable to argue that foreseeable damages, even if they are long-term,

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31   See L. Gisel, above note 21, p. 125.
32   Vienna Convention on the Law of Treaties, 23 May 1969, United Nations, Treaty Series, Vol. 1155, Art. 31 (1).
33   Michael Bothe, Karl Josef Partsch and Waldemar A. Solf, *New Rules for Victims of Armed Conflicts: Commentary on the Two 1977 Protocols Additional to the Geneva Conventions of 1949*, Martinus Nijhoff, Leiden, 2013, para. 2.6.2.

second-and third-tier damages, must be taken into account".[34] Similarly, Sassòli and Cameron take the view that

> the *expected* collateral damage from an attack on a dual-use object … must include the damage *expected* due to the destruction of the object itself, in addition to whatever other collateral damage that may be *expected* in the surrounding area or that is foreseeable, including through reverberating effects.[35]

This approach is consistent with the ordinary meaning of "expected", which is defined in the Oxford English Dictionary as "regard[ed] that something is likely to happen".[36]

Purposive interpretation

Second, the rules on proportionality and precautions in attack must be interpreted in light of their context, including the headings and the respective chapeau provisions of Articles 51 and 57 of AP I. Indeed, AP I Article 51(5)(b) on proportionality should be read in light of the heading of Article 51 ("Protection of the Civilian Population") as well as Article 51(1), which provides that the civilian population and individual civilians "shall enjoy general protection against dangers arising from military operations".[37] Likewise, the specific rules on precautions in attack operate under the umbrella of AP I Article 57(1), which provides that "in the conduct of military operations, constant care shall be taken to spare the civilian population, civilians and civilian objects".[38] It is true that the humanitarian objective of the rule on proportionality is explicitly tempered by military considerations (for instance, by only prohibiting "excessive" incidental damage compared to the concrete and direct military advantage) and that the rules on precautions in attack are contingent upon what is reasonably feasible. However, "incidental damage" as such – separate from the subsequent proportionality assessment or considerations of feasibility – should arguably be interpreted in light of the humanitarian purpose spelled out in the chapeau provisions, so as to provide the broadest protection to civilians, including by requiring that commanders take into account the foreseeable reverberating effects of an attack.

Moreover, the relevance of reverberating effects is affirmed in other articles of AP I, including Articles 54(2) and 56(1), which prohibit attacks on specially protected objects (objects indispensable to the survival of the civilian population

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34 C. Droege, above note 7, p. 572.
35 M. Sassòli and L. Cameron, above note 8, p. 65 (emphasis added).
36 Oxford Dictionary of English, 3rd ed., Oxford University Press, Oxford, 2010, available at: www. oxforddictionaries.com/definition/english/expect.
37 AP I, Art. 51(1).
38 AP I, Art. 57(1); ICRC Customary Law Study, above note 12, Rule 15. According to Kalshoven: "This should be taken literally: total avoidance of damage to the civilian population is the ideal standard that combatants should seek to attain in all cases." Frits Kalshoven, *Constraints on the Waging of War: An Introduction to International Humanitarian Law*, 4th ed., Cambridge University Press, Cambridge, 2011, p. 113.

and works or installations containing dangerous forces), arguably because of the foreseeable humanitarian impact if such objects are damaged or destroyed.[39]

State practice

The rules on treaty interpretation support the view that the notion of "expected" incidental damage as set out in AP I entails an obligation to take into account the reverberating effects of an attack. Increasingly, such an approach also enjoys support in State practice. In particular, there is significant State practice arising from the Third Review Conference on the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects (CCW) in 2006. In the debate concerning Protocol V of the CCW on explosive remnants of war (ERW), several States underlined that the long-term humanitarian impact of ERW for civilians had to be considered as part of the proportionality analysis. For example, Switzerland expressed the view that

> the military commander's proportionality assessment with regard to the choice and use of a particular means or method of warfare must also take into account the foreseeable incidental long term effects of an attack such as the humanitarian costs caused by duds becoming ERW.[40]

As a result, the Final Declaration of the Third Review Conference of the CCW in 2006 – adopted by consensus – notes that "the foreseeable effects of explosive remnants of war are a relevant factor to be considered in applying the international humanitarian law rules on proportionality and precautions in attack".[41] This

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39 See M. Roscini, above note 30, p. 221, note 376.

40 See "Response from Switzerland to Document CCW/GGE/X/WG.1/WP.2," CCW/GGE/XI/WG.1/WP.13, 3 August 2005, § 15. See also "Response from Norway to the Document CCW/GGE/X/WG.1/WP.2," CCW/GGE/XI/WG.1/WP.5, 29 July 2005, § 18 ("a military commander, in his assessment of the proportionality between the military necessity of launching the attack and the humanitarian consequences caused by the attack, must take into consideration both the humanitarian concerns related to the direct impact of the munitions (due to the wide dispersal and in some cases large number of submunitions contained in the bomb), as well as the humanitarian effects caused by unexploded ordnance remaining on the ground after the attack"); "Response from Sweden to Document CCW/GGE/X/WG.1/WP.2," CCW/GGE/XI/WG.1/WP.8, 29 July 2005 § 4 ("It may be argued that a cluster bomb with submunitions that have a high dud rate and is used in populated areas is likely to create a disproportionate suffering for the civilian population compared with the military advantage from the use of such a weapon. Furthermore, it could be argued that a cluster bomb with a large 'foot print' can be considered to be indiscriminate if used in a populated area."); Intervention by Ireland, CCW Review Conference, Main Committee II – Explosive Remnants of War, 9 November 2006 ("Ireland has been concerned to ensure that parties to armed conflict pay due regard to the foreseeable long term effects on civilians of the use of particular weapon systems when considering means and methods of attack."). See also Tim McCormack and Paramdeep Mtharu, *Expected Civilian Damage and The Proportionality Equation: International Humanitarian Law and Explosive Remnants of War*, Asia Pacific Centre for Military Law, University of Melbourne Law School, 2006, pp. 12–13, available at: http://apcml.org/uploads/c0a7d9021926fd6fa4aa87d4737e9ae9cabd06f2.pdf.

41 See Third Review Conference of the High Contracting Parties to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons which May be Deemed to be Excessively Injurious or to Have Indiscriminate Effects, Final Declaration, CCW/CONF.III/11, Part II, 17 November 2006, p. 4 (Final Declaration of the 3rd Review Conference). The Final Declaration was

position is also reflected in the text of Article 3(10)(a) of Amended Protocol II to the CCW, which provides that circumstances to be taken into account when considering all feasible precautions to protect civilians from the effects of weapons include "the short- and long-term effects of mines upon the local civilian population for the duration of the minefield". In 2015, at an ICRC Expert Meeting of States on the use of explosive weapons in populated areas, several States also expressed support for the view that commanders must take into account the foreseeable reverberating effects of an attack.[42]

Moreover, in providing guidance on how to apply the rules on proportionality and precautions in attack, several States refer to the "second-order" or "foreseeable" effects of an attack in their military manuals.[43] For example, the US Army manual *Counterinsurgency* (US Counterinsurgency Manual) of 2006 indicates that

> leaders must consider not only the first-order desired effects of a munition or action, but also possible second and third-order effects – including undesired ones. For example, bombs delivered by fixed-wing close air support may effectively destroy the source of small arms fire from a building in an urban area; however, direct-fire weapons may be more appropriate due to the risk of collateral damage to nearby buildings and non-combatants.[44]

In sum, the interpretation of the AP I rules on proportionality and precautions in attack indicates that the notion of incidental damage is not limited to the direct effects of an attack but encompasses certain reverberating effects, which must be taken into account when assessing the lawfulness of an attack. Although this section has not examined whether the same obligation is inherent in the equivalent customary IHL rules on proportionality and precautions in attack, the growing body of state practice points in that direction – i.e., that they are understood in the same way.

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reached on the basis of consensus between seventy-six States Parties. Available at: www.unog.ch/ 80256EE600585943/(httpPages)/1DB747088014E6D7C12571C0003A0818?OpenDocument.

42 Expert Meeting Report, above note 9, p. 23.

43 For example, see UK Joint Service Manual, above note 9, para. 5.33.4 (in deciding whether an attack would be proportionate, commanders must bear in mind the "foreseeable effects of the attack"; the Manual gives the example of an attack on a military fuel storage depot where there is a foreseeable risk of the burning fuel flowing into a civilian residential area and causing injury to the civilian population); US Law of War Manual, above note 9, p. 342, note 158, citing the US Air Force Pamphlet, 1976 ("International law does not require that a weapon's effects be strictly confined to the military objectives against which it is directed, but it does restrict weapons whose foreseeable effects result in unlawful disproportionate injury to civilians or damage to civilian objects."); Ministry of Defence of Spain, *Orientaciones: El derecho de los conflictos armados*, OR7-004, 18 March 1996, Vol. 1, para. 2.5 ("An attack is prohibited if, during the planning phase, the available information makes it foreseeable that the damage to the civilian population and/or to civilian objects which the attack will cause is excessive in relation to the military advantage anticipated from the attack as a whole.").

44 US Counterinsurgency Manual, above note 9, § 7–36.

What is the scope of the obligation to take into account the reverberating effects of an attack?

Having shown that the rules on proportionality and precautions in attack encompass an obligation to take into account the reverberating effects of an attack, this section examines the scope of this obligation. What is the necessary degree of causation between the attack and the reverberating effects of the attack, such that those effects must be considered for the purposes of the rules on proportionality and precautions in attack? When can reverberating effects be considered too remote in time or space? Are there certain reverberating effects that are in general objectively foreseeable? With a view to identifying more precisely the parameters of the obligation to take into account the reverberating effects of an attack, it is first necessary to examine the legal standard for causation, including the notion of "foreseeability". Moreover, this section will explore the temporal, geographical and material scope of the obligation to take into account the foreseeable reverberating effects of an attack.

Defining the causal link

As previously noted, the position of the ICRC and others is that commanders must take into account the *foreseeable* reverberating effects of an attack.[45] Practically speaking, it is impossible to foresee all possible reverberating effects of an attack. Thus, a reasonable legal standard must reflect this reality and acknowledge that some reverberating effects are too remote and thereby outside the scope of what must be considered at the time of the attack.[46] Limiting the causal link through the standard of foreseeability is in line with the approach adopted by States in defining the scope of incidental damage. For example, the Final Declaration of the Third Review Conference of the CCW notes that "the foreseeable effects of explosive remnants of war are a relevant factor to be considered in applying the international humanitarian law rules on proportionality and precautions in attack".[47] In addition, several States have explicitly adopted the standard of foreseeability in their military manuals.[48] Moreover, the Inter-American Commission on Human Rights stated in its report on Colombia in 1999 that the

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45   2015 Challenges Report, above note 2, pp. 42, 52; Final Declaration of the 3rd Review Conference, above note 41. See also K. Dörmann, above note 27, p. 17; M. Brehm, above note 30, p. 254; R. J. Barber, above note 30, p. 480; C. Droege and M.-L. Tougas, above note 30, p. 30; M. Roscini, above note 30, p. 221.

46   As noted above, the rules of proportionality and precautions in attack, as well as other conduct of hostilities rules, impose an obligation at the time of the attack and not in hindsight. See, for example, F. Kalshoven, above note 38, pp. 101, 105, 185.

47   See Final Declaration of the 3rd Review Conference, above note 41, p. 4.

48   See, for example, Ministry of Defence of Spain, above note 43, Vol. 1, para. 2.5 ("An attack is prohibited if, during the planning phase, the available information makes it foreseeable that the damage to the civilian population and/or to civilian objects which the attack will cause is excessive in relation to the military advantage anticipated from the attack as a whole."); UK Joint Service Manual, above note 9, para. 5.33.4 (commanders must bear in mind the "foreseeable effects of attack"); US Law of War Manual, above note 9, p. 342, note 158, citing the 1976 Air Force Pamphlet ("International law does not require that a weapon's effects be strictly confined to the military objectives against which it is directed, but it

principle of proportionality required that *foreseeable* injury to civilians and damage to civilian objects should not be disproportionate or excessive to the anticipated concrete and direct military advantage.[49]

Different tests have been proposed to define the requisite causal link for the purpose of the obligation to take into consideration reverberating effects under the rules of proportionality and precautions in attack. For example, in the context of computer network attacks, Schmitt, Harrison Dinnis and Wingfield have suggested a "but for" legal test requiring that the attack must be the "proximate cause" of the effects – i.e., reverberating effects are only relevant to the proportionality assessment and the obligation to take feasible precautions in attack, if such effects would not have occurred "but for" the attack.[50] In effect, a "but for" test reverses the assessment, such that it is necessary to start by examining the reverberating effect in question and tracing a line of causation back to the attack. Although this approach may be more effective in excluding those effects that are too remote, it would appear more useful for an *ex post facto* assessment as opposed to a standard that can be easily complied with by commanders in the field.

Another test focuses on the degree of likelihood of the reverberating effects. In this regard, Greenwood argues that in its normal meaning, "a consequence is said to be expected if it is thought more likely than not that the consequence will result. A lesser degree of risk is not sufficient."[51] Similarly, the Commentary on the *Harvard Humanitarian Policy and Conflict Research Manual on International Law Applicable to Air and Missile Warfare* (AMW Manual) takes the view that "expected" (and "anticipated") "means that the outcome is *probable*, i.e. more likely than not".[52] This approach, however, is based on an overly restrictive interpretation of "expected". As noted above, the ordinary meaning of "expected" is that something is "*likely* to occur" rather than "more likely than not". Even if the risk of incidental damage is only 40% likely (i.e., less likely than not), it is still foreseeable and should be taken into account when applying the rules on proportionality and precautions in attack. Thus, at a 2005 expert meeting convened by the Geneva Academy of

does restrict weapons whose *foreseeable effects* result in unlawful disproportionate injury to civilians or damage to civilian objects." (emphasis added)).

49   Inter-American Commission on Human Rights, *Third Report on the Human Rights Situation in Colombia*, OEA/Ser.L/V/II.102, Doc. 9, Rev. 1, 26 February 1999, para. 79.

50   Michael N. Schmit, Heather A. Harrison Dinnis and Thomas C. Wingfield, *Computers and War: The Legal Battlespace*, Background Paper prepared for the Informal High-Level Expert Meeting on Current Challenges to International Humanitarian Law, Cambridge, 25–27 June 2004, p. 9, available at: www.hpcrresearch.org/sites/default/files/publications/schmittetal.pdf, cited in M. Roscini, above note 30, p. 221.

51   See Christopher Greenwood, Observations dated 13 November 2003 circulated by the United Kingdom Delegation to the CCW Group of Governmental Experts, 17–24 November 2003, cited in William H. Boothby, *Cluster Bombs: Is There a Case for New Law?*, Occasional Paper Series, Program on Humanitarian Policy and Conflict Research, Harvard University, 2005, p. 28.

52   Commentary on the AMW Manual, above note 8, p. 91 (emphasis added). See also M. Roscini, above note 30, p. 221. It should be noted, however, that in relation to reverberating effects, the AMW Manual specifically endorses an approach based on reasonable foreseeability, stating that "indirect effects cannot be taken into account if they are too remote or cannot be reasonably foreseen".

International Humanitarian Law and Human Rights, it was argued that the scope of the obligation should be based on the notion of "reasonable causality", meaning that attackers must take into account "civilians dying of thirst, if there [is] a *reasonable expectation of causality* or if thirst and certain diseases [are] a *likely* or *foreseeable* consequence of the attack".[53]

Accepting that foreseeability is the most appropriate standard for limiting the scope of the reverberating effects that must be taken into account, it is necessary to examine this standard in greater detail.

Is "foreseeable" a subjective or objective standard?

At one end of the spectrum, it is sometimes argued that the rules on proportionality and precautions in attack inevitably involve a subjective assessment by the military commander responsible for launching the attack. In particular, this view holds that the process of assessing both the concrete and direct military advantage, as well as the expected incidental damage, is based on the subjective view of the military commander in light of his or her specific skills, experience and knowledge, in the circumstances ruling at the time.[54] In addition, it has been argued that determining whether the expected incidental harm is excessive in relation to the concrete and direct military advantage is also a subjective matter. For example, according to the US *Law of War Manual*, "the question of whether the expected incidental harm is excessive may be a highly open-ended legal inquiry, and the answer may be subjective and imprecise".[55]

In contrast to the view that the expected incidental damage and anticipated military advantage should be assessed on an entirely subjective basis, it is argued that the rules on both proportionality and precautions in attack incorporate a degree of objectivity. This is supported by the terms "may be" and "expected" in the relevant provisions, which in conjunction clarify that the relevant standard is not what the commander in fact, subjectively, expected, but what can objectively be predicted. This interpretation finds support in the ICRC Commentary to Article 57 of AP I, which, while recognizing that the rule on precautions in attack includes an element of subjectivity, notes that "the interpretation must above all be a question of common sense and good faith for military commanders".[56] In other words, compliance with the rule must also be measured against the objective standards of "common sense" and "good faith for military commanders".[57]

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53   *Ibid.*
54   In M. Bothe, K. J. Partsch and W. A. Solf, above note 33, pp. 351–352, the authors note that the decision on "whether those effects are excessive" will "involve a balancing of different values which are difficult to compare" and thus "the judgment must be subjective". Yet, "[d]espite the impossibility of quantifying the factors of the equation, a plain and manifest breach of the rule will be recognizable".
55   US *Law of War Manual*, above note 9, § 5.12.4. See also § 2.4.1.2 ("Under the law of war, judgments of proportionality often involve difficult and subjective comparisons.").
56   ICRC Commentary to AP I, § 2208. See also ICRC Commentary to AP I, § 1978.
57   See Marco Sassòli, "Autonomous Weapons and International Humanitarian Law: Advantages, Open Technical Questions and Legal Issues to be Clarified", *International Law Studies*, Vol. 90, 2014, p. 335.

More recently, the objective element of these rules has been framed as a requirement of reasonableness. For example, Dinstein takes the view that the attacker "must act reasonably and in good faith".[58] A similar approach is taken in the 2001 Canadian *Manual on the Law of Armed Conflict* in relation to the rule on precautions in attack: "The test for determining whether the required standard of care has been met is an objective one: Did the commander, planner or staff officer do what a reasonable person would have done in the circumstances?"[59] This approach is also adopted by Kalshoven, who indicates that the relevant standard is "that of a normally alert attacker who is reasonably well-informed and who, moreover, makes reasonable use of the available information".[60]

An objective standard is also reflected in the case law on disproportionate attacks, namely in the *Galić* case before the International Criminal Tribunal for the former Yugoslavia (ICTY). Here, the Tribunal held that

> in determining whether an attack was proportionate it is necessary to examine whether a reasonably well-informed person in the circumstances of the actual perpetrator, making reasonable use of the information available to him or her, could have expected excessive civilian casualties to result from the attack.[61]

While it must be emphasized that IHL and international criminal law (ICL) are distinct bodies of law, the latter is an important source of interpretation of IHL rules.[62] As argued by Sassòli and Cameron, "any behaviour which leads to

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58 Y. Dinstein, above note 10, p. 159. See also Michael. N. Schmitt and Jeffrey S. Thurnher, "'Out of the Loop': Autonomous Weapon Systems and the Law of Armed Conflict", *Harvard National Security Journal*, Vol. 4, 2013, p. 256 ("the 'quantification' of the military value of a target in terms of collateral damage does not require surgical precision. Rather, the test is one of reasonableness."); A. P. V. Rogers, *Law on the Battlefield*, 3rd ed., Manchester University Press, Manchester and New York, 2012, p. 151 ("the test must be one of reasonableness"). See also 2015 Challenges Report, above note 2, p. 52.

59 Canada, Office of the Judge Advocate General, *Law of Armed Conflict at the Operational and Tactical Levels*, Joint Doctrine Manual, 13 August 2001, § 418. See also Brian J. Bill (ed.), *Law of War Deskbook*, US Army, International and Operational Law Department, 2010, pp. 140–141: "In judging a commander's actions one must look at the situation as the commander saw it in light of all circumstances. The question of reasonableness, however, ensures an objective standard that must be met as well. In this regard, two questions seem relevant. Did the commander gather a reasonable amount of information to determine whether the target was a military objective and that the incidental damage would not be disproportionate? Second, did the commander act reasonably based on the gathered information? Of course, factors such as time, available staff, and combat conditions affecting the commander must also factor into the analysis."

60 F. Kalshoven, above note 38, p. 115 (the proportionality assessment is "not entirely left to the subjective judgment of the attacker").

61 ICTY, *Prosecutor v. Stanislav Galić*, Case No. IT-98-29, Judgment (Trial Chamber), 30 November 2003, § 58. This test has been endorsed by a number of commentators: see Marco Roscini, above note 30, p. 228; Paolo Benvenuti, "The ICTY Prosecutor and the Review of the NATO Bombing Campaign against the Federal Republic of Yugoslavia", *European Journal of International Law*, Vol. 12, No. 3, 2001, p. 517; Ian Henderson, *The Contemporary Law of Targeting: Military Objectives, Proportionality and Precautions in Attack under Additional Protocol I*, Martinus Nijhoff, Leiden, 2009, p. 222. A similar test was also set out in ICTY, *Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign against the Federal Republic of Yugoslavia*, 11 December 2002, § 50. This approach in the report is supported by W. H. Boothby, above note 18, p. 96.

62 Several authors refer to the ICTY case law and the Rome Statute: for example, Y. Dinstein, above note 10, p. 159; W. H. Boothby, above note 18, pp. 98–97.

individual criminal responsibility must first be contrary to the standard of care required by IHL from belligerent parties".[63]

A similar but slightly distinct approach is to focus not only on a standard of "reasonable person", but on the slightly higher standard of "reasonable commander". According to Cannizzaro, the standard of reasonable commander "on the one hand tends to locate the assessment of proportionality with the subjective situation of the agent, but on the other hand seems to require an objective degree of diligence".[64] For example, Sassòli and Cameron argue that

> while the average "reasonable person" on the street might not be expected to foresee that destroying electricity facilities would cut off the civilian fresh water supply, the reasonable military commander, who is aware of the interconnectedness of infrastructure, would be expected to foresee this consequence.[65]

The standard of the reasonable commander has been embraced by some States. For example, Israel takes the view that:

> the principle of proportionality requires consideration of a commander's assessment of the expected collateral damage from an attack. The test is based on the expected collateral damage that a "reasonable commander" would have assessed at the time of attack – and not the damage that actually occurred as a result of the attack.[66]

In relation to reverberating effects, the standard of the reasonable commander would require that the attacker takes into account the reasonably foreseeable reverberating effects of the attack, meaning *those effects that are foreseeable for a reasonable commander*, making use of the information that is reasonably available to him or her, and in light of the circumstances ruling at the time, including whether the attack is pre-planned or an attack of opportunity. This is the preferred standard of care as it excludes negligent behaviour that does not meet an objective degree of diligence, whilst clearly taking into account that the rules apply based on the circumstances ruling at the time.

Are some reverberating effects objectively foreseeable?

Acknowledging that "reasonable foreseeability" entails an objective standard enables the identification of certain elements that a reasonable commander

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63 M. Sassòli and L. Cameron, above note 8, p. 64.
64 Enzo Cannizzaro, "Proportionality in the Law of Armed Conflict", in Paola Gaeta and Andrew Clapham (eds), *The Oxford Handbook of International Humanitarian Law*, Oxford University Press, Oxford, 2014, p. 340.
65 M. Sassòli and L. Cameron, above note 8, p. 65. Likewise, Shue and Wippman contend that "the effects of large-scale infrastructure attacks are clear and foreseeable", and that "the proportionality principle obliges states to make at least a good faith effort to factor indirect effects into their targeting decisions". See H. Shue and D. Wippman, above note 20, pp. 570–571.
66 State of Israel, *The 2014 Gaza Conflict (7 July–26 August 2014): Factual and Legal Aspects*, May 2015, pp. 49, 317.

should take into account – i.e., which would be unreasonable to ignore – when assessing the expected reverberating effects of an attack. Reverberating effects may be considered reasonably and objectively foreseeable based on past practice and empirical research, lessons learned and publicly available information.

Past practices and empirical data

While recognizing that no two cases are identical, past experiences and empirical data can contribute to making certain reverberating effects foreseeable. For instance, in light of the nuclear attacks on Hiroshima and Nagasaki and the extensive subsequent research exposing the long-term effects of these attacks, it can no longer be argued that reverberating effects of using nuclear weapons – such as long-term health effects – are too remote or speculative.[67] In the context of the CCW negotiations on Protocol V on ERW, past practice and extensive documentation regarding the failure rates of submunitions provided an important indication of the foreseeable reverberating effects of an attack using such weapons. For example, the ICRC stated that

> in light of the experience gained from the use of cluster munitions in past conflicts and the work of governments and organizations to address them, the ICRC is of the view that the application of the proportionality rule must now include the extended impact of submunitions (and other ordnance) that become ERW. When these weapons are used in or near populated areas the long-term consequences of unexploded submunitions upon civilians are readily foreseeable. If civilians are already present in a target area, they will predictably need to gather food and water, travel, seek medical care and conduct other daily activities which put them at risk from unexploded submunitions. If they have left the area during the hostilities, it is predictable that they will return at the earliest opportunity and be at risk from unexploded submunitions.[68]

In effect, "past experience has put users on notice about the long-term dangers that cluster munitions cause to civilians".[69] As noted above, past practice was accepted in

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67 Louis Maresca and Eleanor Mitchell, "The Human Costs and Legal Consequences of Nuclear Weapons Under International Humanitarian Law", *International Review of the Red Cross*, Vol. 97, No. 899, 2015, pp. 623–626.

68 Working Paper submitted by the ICRC, CCW/GGE/XI/WG.1/WP.7, Geneva, 28 July 2005, § 21. According to Tim McCormack, who presented at the CCW meetings on ERW, "[w]henever the use of weapons likely to cause ERW is contemplated in residential areas or in areas otherwise known to be frequented by the civilian population, assessments of expected civilian damage ought to take account of the consistent conclusion of numerous reports and studies carried out by international and non-governmental organisations, many of which include data on percentages of munitions which fail to explode and the effect of such unexploded ordnance on civilian populations". See T. McCormack and P. Mtharu, above note 40, § 27. Further, McCormack states: "If such weapons are to be deployed in residential areas or on arable farmland then the expected failure rate and consequent expected ERW problem ought to be factored into the proportionality equation." Report of presentation by Professor Tim McCormack, CCW/GGE/XI/WG.1/WP.19, 25 August 2005, § 11.

69 Louis Maresca, "Cluster Munitions: Moving Toward Specific Regulation", *UNIDIR Disarmament Forum*, United Nations Institute for Disarmament Research, 2006, p. 29.

the context of the CCW as an important source of understanding the objectively foreseeable reverberating effects of certain weapons.[70]

At least Ireland and Norway have made explicit reference to the foreseeable effects of an attack or a particular weapon being informed by past practice. For example, Ireland has noted that military commanders "will be informed in their assessments of likely, post-conflict harm to civilian life and property by – amongst other things – the considerable research into this question that has been done in recent years".[71] Similarly, at an ICRC Expert Meeting on the humanitarian, technical, legal and military challenges posed by cluster munitions, a representative from the Norwegian Ministry of Defence expressed the view that

> it is difficult to claim that the long-term effects of cluster munitions are too remote or uncertain to be considered by a military commander. Experiences in Vietnam, Laos, and other places have demonstrated both the magnitude of the problem and the length of time required to resolve it.[72]

Past experiences and empirical data have also informed the foreseeable reverberating effects of damage to or destruction of electricity networks. For example, it is estimated (conservatively) that the coalition attacks on Iraq's electrical power system in 1991 resulted in 70,000 civilian deaths.[73] In effect, the attacks reduced Iraq's power capacity to 15% of its pre-conflict levels, with a significant impact on health services (reduced hospital capacity, inability to refrigerate adequate quantities of vaccines) and sanitation (inability to treat and dispose of raw sewerage).[74] More recently, statistical analysis has demonstrated that disruption of electricity and safe drinking water can have a dramatic impact on civilian lives and health. For instance, the increase in hepatitis, dysentery and typhoid in certain parts of Syria has been attributed to the reduced access to safe drinking water, sanitation and hygiene in those areas.[75]

In some cases, past experiences, such as the attacks in Iraq, have led to a change in policy. For example, during Operation Allied Force in Kosovo, NATO forces sometimes used carbon graphite filaments designed to temporarily disrupt power. This was in part based on a policy decision to minimize long-term incidental harm to civilians.[76] In addition, greater awareness in the public domain

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70 See Final Declaration of the 3rd Review Conference, above note 41.
71 Statement by Ireland, CCW 3rd Review Conference, Main Committee II, 9 November 2006. According to the New Zealand delegation at a CCW meeting in June 2003, "through the improved collection of information on weapons used, clearance operations and civilian casualties from mines and ERW including submunitions, we are beginning to know more about when the greatest numbers of civilian casualties actually occur and would expect that this information is also available to militaries for informing the conduct of their military operations".
72 ICRC, *Expert Meeting: Humanitarian, Military, Technical and Legal Challenges of Cluster Munitions*, report, Montreux, Switzerland, 18–20 April 2007, p. 60.
73 W. Arkin, above note 6, p. 110.
74 J. Crawford, above note 6, p. 110.
75 UNICEF, "News Note: Millions of Children in Syria at High Risk of Disease amid Water Scarcity and Summer Heat", 10 July 2015, cited in Urban Services Report, above note 4, p. 31.
76 Randy W. Stone, "Protecting Civilians during Operation Allied Force: The Enduring Importance of Proportional Force and NATO's Use of Armed Force in Kosovo", *Catholic University Law Review*,

regarding the interconnectedness of essential services has put commanders on notice regarding the objectively foreseeable reverberating effects of damage to or destruction of essential infrastructure.[77] For instance, the report of the ICRC Expert Meeting on Explosive Weapons in Populated Areas provides the example that "if the energy supply is cut, the ability to ensure the continuity of the water supply service and the evacuation and treatment of wastewater out of a populated area diminishes".[78]

Finally, it should be noted that the logic of objectively foreseeable effects is already incorporated into decision-making tools, which are adapted so as to take into account past practices and ensure that lessons learned are incorporated into future targeting assessments. For example, collateral damage estimation methodologies (CDMs) – used by some militaries to estimate the expected collateral damage arising from an attack – rely on testing and data, as well as analysis of past practice and lessons learned through battle damage assessments.[79] Indeed, the CDM used by the United States joint services notes that "[a]s a science, the CDM uses a mix of empirical data, probability, historical observations, and complex modeling for [collateral damage estimation] analysis".[80] States are also required to take into account the foreseeable effects of a particular weapon when carrying out legal reviews of new weapons under Article 36 of AP I.[81] Given the remoteness from the actual combat situation in which the weapon might be used in the future when carrying out the weapons review, this assessment must be premised on an assessment of the objectively foreseeable effects of the weapon in question.

The context of the attack

The circumstances ruling at the time of the attack will impact what kind of reverberating effects may be objectively foreseeable. With respect to repeated or cumulative attacks, to the extent that the effects of past attacks on a populated area are – or should – reasonably be known, this must also be taken into account for the purpose of respecting the rules on proportionality and precautions in

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Vol. 50, No. 2, 2001, cited in H. Shue and D. Wippman, above note 20, p. 565. Carbon fibre bombs were also used to attack power distribution facilities in Iraq on the basis that they were designed to temporarily incapacitate rather than destroy. See Human Rights Watch, *Off Target: The Conduct of the War and Civilian Casualties in Iraq*, New York, 2003, p. 43.

77 Urban Services Report, above note 4, pp. 28–32; 2015 Challenges Report, above note 2, p. 52. See also Expert Meeting Report, above note 9, p. 23.

78 *Ibid.*, p. 15.

79 Some multinational forces also monitor civilian casualties through civilian casualty tracking mechanisms. See *ibid.*, p. 6.

80 US Chairman of the Joint Chiefs of Staff, *No-Strike and the Collateral Damage Estimation Methodology*, Instruction, CJCSI 3160.01A, 2012, p. D-1. In addition, the Instruction states: "The CDM is not an exact science. The supporting technical data and processes of the methodology are derived from physics-based computer models which generate statistical results, weapons test data, and operational combat observations." *Ibid.*, p. D-2.

81 ICRC, *A Guide to the Legal Reviews of New Weapons, Means and Methods of Warfare: Measures to Implement Article 36 of Additional Protocol I of 1977*, Geneva, 2006, p. 15.

attack.[82] If a commander is aware that civilian infrastructure has been partially damaged, it is foreseeable that any further incidental damage caused by an attack will increase the reverberating effects on civilians. For example, if an attacker knows that a water treatment plant is only operating at 50% of its capacity due to previous damage, the reverberating effects on civilians caused by further incidental damage to the plant will be more significant than if the treatment plant was fully functioning. This is particularly true if the cumulative attacks take place in a short period of time, as it is then likely that the attacker is aware of the extent of past incidental loss of life, injury and damage.

Moreover, known contextual factors such as economic sanctions, blockades, the protracted nature of a conflict or the inability of engineers to repair essential infrastructure due to denial of access may also be relevant to an assessment of the foreseeable reverberating effects of an attack. For instance, if there are long-term sanctions in place, and it is known that construction material is not accessible or is severely restricted, it is objectively foreseeable that the reverberating effects of an attack are more likely to last longer and be more severe. Similarly, if essential infrastructure cannot be repaired because access to the targeted area is systematically denied (including for engineers), it is reasonably foreseeable that the reverberating effects of an attack which damages essential infrastructure can be expected to have a more significant impact on civilians in the area. Likewise, in protracted conflicts such as those in Syria, eastern Ukraine, Libya or Yemen, it is reasonably foreseeable that the quality of essential services will have declined due to years of neglect or inability (financial or otherwise) to ensure proper maintenance of infrastructure and that the reverberating effects of damage to or destruction of essential civilian infrastructure – meaning the infrastructure which if damaged or destroyed will have a significant impact on essential services – will therefore have a more significant impact on the lives and health of the affected population.[83]

Temporal scope of "foreseeability"

In identifying the scope of the obligation to take into account the reasonably foreseeable reverberating effects of an attack, a lot of attention has been focused on the appropriate temporal scope. In other words, when an attacker is assessing the compliance of an attack in accordance with the rules on proportionality and precautions in attack, how far into the future should he or she consider? Is it necessary to balance the concrete and direct military advantage anticipated against the effects of an attack that are expected to eventuate in the days, months or even years following the attack?

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82 *Ibid.*, p. 23.
83 Urban Services Report, above note 4, pp. 21–28; World Health Organization, "WHO Warns of Increased Risk of Disease Epidemics in Syria and in Neighbouring Countries as Summer Approaches", press release, 3 June 2013 (indicating that 35% of Syria's public hospitals were not functioning and in some areas, 70% of medical staff had fled the country), available at: www.emro.who.int/press-releases/2013/disease-epidemics-syria.html.

As was demonstrated during the CCW discussions concerning ERW,[84] there is no clear consensus on this question. On the one hand, it has been argued that the time frame of the "expected effects" of an attack should be limited, as long-term effects are too remote. For example, in 2002, Greenwood suggested that it is only the "immediate risk" (i.e., during the attack and in the hours immediately after the attack) from ERW that should be considered in the proportionality equation, because the "long-term risk" posed by ERW "turns on too many factors which are incapable of assessment at the time of the attack".[85] According to Greenwood, such factors include "when and whether civilians will be permitted to return to an area, what steps the party controlling that area will have taken to clear unexploded ordnance, [and] what priority that party gives to the protection of civilians".[86] At least two States at the CCW supported this view.[87] Similarly, Kenneth Rizer expressed the view in 2001 that "open-ended consideration of indirect effects is … troubling" as it "opens up a Pandora's box of other problems", particularly the impossibility of defining a precise temporal limit for when indirect effects can be considered as too remote.[88] Ultimately, this line of argument seeks to remove the challenges posed by an unknown number of intervening factors by drawing a neat cut-off point after the "immediate" effects of an attack.

In contrast to this approach, a number of States and commentators have argued that the long-term effects of an attack are indeed relevant to the rules on proportionality and precautions in attack. At the CCW, a number of states including Brazil,[89] the Czech Republic,[90] Norway,[91]

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84 The CCW examined legal regulation of ERW from 2000 to 2006, with adoption of Protocol V on ERW in 2004.

85 Christopher Greenwood, *Legal Issues Regarding Explosive Remnants of War*, Working Paper submitted to the CCW Group of Governmental Experts, CCW/GGE/I/WP.10, 22 May 2002, § 23. The paper was presented by the UK delegation to the first of several Groups of Governmental Experts that led to negotiations on Protocol V.

86 *Ibid.*

87 Pakistan, Statement at the 11th session of the Group of Governmental Experts, CCW, 2 August 2005; Response from the United States of America, "Responses to Document CCW/GGE/X/WG.1/WP.2, Entitled IHL and ERW, Dated 8 March 2005", CCW/GGE/XI/WG.1/WP.4, 25 July 2005, available at: http://repository.un.org/bitstream/handle/11176/256880/CCW_GGE_XI_WG.1_WP.4-EN.pdf?sequence=3&isAllowed=y.

88 Kenneth Rizer, "Bombing Dual-Use Targets: Legal, Ethical and Doctrinal Perspectives", *Air & Space Power Journal*, May 2001, p. 8.

89 Brazil noted that the proportionality rule applies if the remains of cluster munitions might continue to cause casualties long after the end of the armed conflict. Brazil stated that the "post-conflict" effects should be taken into account at the time of use. Response from Brazil, "Responses to Document CCW/GGE/X/WG.1/WP.2, Entitled IHL and ERW, Dated 8 March 2005", CCW/GGE/XII/WG.1/WP.1, 12 September 2005, available at: http://courseweb.stthomas.edu/vowiebe/IHERWQuestionnaire%20and%20responses/Brazil050912.DOC.

90 Response from the Czech Republic, "Responses to Document CCW/GGE/X/WG.1/WP.2, Entitled IHL and ERW, Dated 8 March 2005", CCW/GGE/XIII/WG.1/WP.2, 10 February 2006: "the use of munitions [that are] likely to fail … might contradict this principle [of proportionality], as the low reliability of such munitions could cause collateral damage exceeding the lawful level by increasing its probability and decreasing its military effectiveness".

91 Norway stated that military commanders must take into consideration "both the humanitarian concerns related to the direct impact of the munitions as well as the humanitarian effects caused by unexploded ordnance remaining on the ground after the attack". Response to the IHL Questionnaire from Norway,

Sweden,[92] Switzerland[93] and Ireland[94] expressed the view that the "long-term" effects of ERW must be taken into account when complying with the rule on proportionality in attack.[95] Additionally, Austria indicated that the "subsequent effects" of ERW must also be considered as part of the obligation to take all feasible precautions in attack.[96] In particular, New Zealand questioned the "immediate effects" standard, noting that this was an arbitrary measurement: "the periods of 'during an attack' or 'hours immediately' after an attack may not always be when civilians are at greatest risk from submunitions".[97] Similarly, the Committee Established to Review the NATO Bombing Campaign against the Federal Republic of Yugoslavia also referred to a standard based on the "long-term effects": "even when targeting admittedly legitimate military objectives, there is a need to avoid excessive long-term damage to the economic infrastructure and natural environment with a consequential adverse effect on the civilian population".[98] An extreme example is the case of a nuclear attack, where it is certainly foreseeable that the attack is likely to result in casualties not only in the days, weeks and months following the attack, but also during the subsequent years and decades.[99]

"States Parties' Responses to the 'International Humanitarian Law and ERW' Questionnaire", CCW/GGE/XI/WG.1/WP.5, 29 July 2005, § 19, available at: http://repository.un.org/handle/11176/256881.

92 Statement by Sweden on the McCormack Report, CCW 13th Meeting of the Group of Government Experts on ERW, March 2006 ("a cluster bomb with submunitions that have a high dud rate and is used in populated areas is likely to create disproportionate suffering for the civilian population compared with the military advantage from the use of such a weapon").

93 Response to the IHL Questionnaire from Switzerland, "States Parties' Responses to the 'International Humanitarian Law and ERW' Questionnaire", CCW/GGE/XI/WG.1/WP.13, 3 August 2005, § 15, available at: http://repository.un.org/handle/11176/256892 ("proportionality assessment … must also take into account the foreseeable incidental long-term effects of an attack such as the humanitarian costs caused by duds becoming ERW" such that "ammunitions with high dud rates will influence the proportionality balance negatively and diminish the options of their use against legitimate military objectives").

94 Statement by Ireland on the McCormack Report, CCW 13th Meeting of the Group of Government Experts on ERW, March 2006 (Ireland agreed with the statement in the Report that "after years of experiencing the effects of ERW, including the collation of data on the humanitarian effects of ERW, parties to an armed conflict cannot simply ignore the likely longer term effects of the use of cluster munitions in civilian residential areas or in other areas civilians are expected to return to after the cessation of hostilities").

95 The same view was expressed by McCormack and Mtharu in their analysis of States' responses. See Tim McCormack, Paramdeep B. Mtharu and Sarah Finnin, *Report on States Parties' Responses to the Questionnaire: International Humanitarian Law and Explosive Remnants of War*, February 2006, p. 20.

96 Response to the IHL Questionnaire from Austria, "States Parties' Responses to the 'International Humanitarian Law and ERW' Questionnaire", CCW/GGE/XI/WG.1/WP.14, 4 August 2005, § 11, available at: http://repository.un.org/handle/11176/256893 ("the application of the principle [of proportionality] is not limited to the intended effects of an attack …. [T]he effects of duds – which are inherently incidental – seem to be covered by this provision").

97 Statement by New Zealand at the CCW Meeting of Government Experts, June 2003 ("prior to an attack civilians may have fled to a safer area and it may be that immediately in the hours after an attack there is a low level of civilian casualties from ERW. A second possible scenario is where the presence of large numbers of military personnel limits the movement of civilians and it is some time before civilians have freedom of movement in an ERW-affected area.").

98 ICTY, *Final Report to the Prosecutor*, above note 61, § 18.

99 L. Maresca and E. Mitchell, above note 67, p. 634.

A third view, according to Rogers, is that the issue of longer- or shorter-term effects probably "does not matter so long as the same timescale is applied to both limbs" of the proportionality test.[100] This is a controversial approach given that the scope of incidental damage is not qualified in Article 51(5)(b) by any adjectives. Thus, whilst the anticipated military advantage is limited to the "direct and concrete" military advantage – meaning that which is "substantial and relatively close" and not that which is "hardly perceptible" or "which would only appear in the long term" – as explained above, there is no reason based on the text of AP I to likewise limit the scope of incidental damage to "direct and concrete".

While the very nature of reverberating effects means that they will typically not take place immediately,[101] identifying a precise temporal scope for foreseeable reverberating effects is challenging. In this regard, it is important to query the added value of identifying the precise temporal scope of the effects that must be taken into account. On the one hand, specific temporal measurements risk being arbitrary. On the other hand, the temporal scope of broader phrases such as "long-term effects of an attack" remains ambiguous. Additionally, there is not necessarily a direct correlation between the foreseeability of reverberating effects and the time at which the effects eventuate. Indeed, the effects of an attack may be foreseeable and take place months or years in the future (e.g. environmental damage), or they may be unforeseeable and take place in the days following an attack (e.g. contamination of water due to an oil spill). Accordingly, it is preferable to focus on the objective foreseeability of the reverberating effects of an attack, regardless of the time at which such effects eventuate, meaning, those reverberating effects that are likely to occur based on the information reasonably available to the commander at the time of the attack.[102]

Material scope of "foreseeability"

Regarding the material scope of the obligation to consider the reverberating effects of an attack, it is clear that it is not possible to establish clear-cut boundaries regarding the types of effects that should be taken into account. That said, it is helpful to identify some effects that may be considered reasonably foreseeable for the purposes of assessing the incidental harm that can be expected from an attack.

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100 A. P. V. Rogers, above note 58, p. 22.
101 It should be noted that there may be some reverberating effects which will take place immediately, such as secondary explosions resulting from an attack on a munitions storage facility. However, in most cases, reverberating effects take place subsequent to an attack.
102 See C. Droege, above note 7, p. 573. A similar approach is taken by McCormack and Mtharu in a Working Paper submitted to the Third Review Conference of the CCW: "Whenever the use of weapons likely to cause ERW is contemplated in residential areas or in areas otherwise known to be frequented by the civilian population, assessments of expected civilian damage ought to take account of the consistent conclusion of numerous reports and studies carried out by international and non-governmental organizations, many of which include data on percentages of munitions which fail to explode and the effect of such unexploded ordnance on civilian populations." See Tim McCormack and Paramdeep B. Mtharu, "Expected Civilian Damage and the Proportionality Equation – To What Extent Should the Mid to Longer Term Consequences of Explosive Remnants of War be Taken into Consideration in the Proportionality Assessment", Working Paper, CCW/CONF.III/WP.9, 15 November 2006, para. 27.

As a starting point, the rules on proportionality and precautions in attack both limit the types of harm, including reverberating effects, which are to be taken into account by explicitly referring to the expected incidental "loss of civilian life, injury to civilians and damage to civilian objects". In interpreting these terms, it is argued that loss of civilian life includes the death of military medical and religious personnel, who are considered civilians for the purposes of the IHL rules on the conduct of hostilities.[103] Additionally, it is widely held that damage to civilian objects includes loss of functionality of a civilian object[104] as well as environmental damage.[105] Finally, given that the ordinary meaning of "injury" includes both "an instance of being injured" and "the fact of being injured; harm or damage",[106] "injury" should be understood broadly to include wounding as well as illness and disease. This view is supported in the *Tallinn Manual on the International Law Applicable to Cyber Warfare* (Tallinn Manual), which concludes that "serious illness and severe mental suffering that are tantamount to injury" also fall within the scope of incidental harm.[107]

The idea that psychological injury should be taken into account in the proportionality assessment and in the application of the precautionary rules is increasingly accepted.[108] Moreover, there is no principled reason for restricting injury to physical injury, when its scope is acknowledged to include illness and disease, as there are also mental illnesses that may result from an attack. Lieblich relies on the IHL prohibition against terrorizing civilians and recent research on post-traumatic stress disorder to argue that "incidental mental harm cannot be brushed aside … if IHL is to maintain its integrity as a legal body aiming to minimize civilian harm".[109] While it is generally considered that mere inconvenience, stress or anxiety do not enter into the proportionality

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103 Laurent Gisel, "Can the Incidental Killing of Military Doctors Never Be Excessive?", *International Review of the Red Cross*, Vol. 95, No. 889, 2013, pp. 220–230.

104 2015 Challenges Report, above note 2, p. 41; Robin Geiss and Henning Lahmann, "Cyber Warfare: Applying the Principle of Distinction in an Interconnected Space", *Israel Law Review*, Vol. 45, No. 3, 2012, p. 397, cited in M. Roscini, above note 30, p. 222. See also C. Droege, above note 7, p. 559 (arguing that "disrupting the function of certain systems by interfering with their underlying computer systems can amount to damage insofar as it impairs their usefulness"). According to the Group of Experts who drafted the Tallinn Manual, the notion of "damage to civilian objects" might, in certain circumstances, include deprivation of functionality. See Tallinn Manual, above note 8, p. 160.

105 C. Droege and M.-L. Tougas, above note 30, pp. 25–27; Karen Hulme, "Taking Care to Protect the Environment Against Damage: A Meaningless Obligation?", *International Review of the Red Cross*, Vol. 82, No. 879, 2010, pp. 677–678. See also Laurent Gisel, *The Conduct of Hostilities and International Humanitarian Law: Challenges of 21st century Warfare*, Workshop Discussion Paper for Working Group 3, "Modern Warfare and the General IHL Principles Governing the Conduct of Hostilities", International Law Association – Study Group, University of Leiden, 22–23 November 2013 (unpublished, on file with the author).

106 Oxford Dictionary of English, 3rd ed., Oxford University Press, Oxford, 2010, available at: www.oxforddictionaries.com/definition/english/injury.

107 Tallinn Manual, above note 8, p. 108.

108 See, for example, Eliav Lieblich, "Beyond Life and Limb: Exploring Incidental Mental Harm Under International Humanitarian Law", in Derek Jinks, Jackson Maogoto and Solon Solomon (eds), *Applying International Humanitarian Law in Judicial and Quasi-Judicial Bodies*, Asser Press, The Hague, 2014, p. 185 ff; L. Gisel, above note 21, p. 120; Tallinn Manual, above note 8, p. 108.

109 E. Lieblich, above note 108, p. 189.

assessment,[110] it is submitted that this should not be read as a rejection of the relevance of more severe mental suffering, but rather as a demonstration that the less severe the injury – whether physical or mental – the less likely it is that the incidental civilian damage will be considered excessive compared to the anticipated military advantage.[111]

In addition to loss of civilian life, injury to civilians and damage to civilian objects, it has been argued that the types of harm which are relevant for the rules on proportionality and precautions in attack should be interpreted more broadly to include other humanitarian consequences – for example, displacement or economic hardship caused by contamination and loss of functionality of farming land. This approach has received some support. For example, Norway has previously expressed the view that military commanders should take into account "the humanitarian consequences caused by the attack" and the "more long-term humanitarian problems".[112] Likewise, the recent report of the UK Iraq Inquiry (investigating the UK military intervention and presence in Iraq from 2003 to 2009) indicates that

> a Government has a responsibility to make every reasonable effort to identify and understand the likely and actual effects of its military actions on civilians. That will include not only direct civilian casualties, but also the indirect costs on civilians arising from worsening social, economic and health conditions.[113]

Adopting an even broader view, Reynolds argues that a "thorough indirect collateral damage assessment must evaluate all foreseeable effects of a military operation on violence, crime, political infrastructure, housing, environment, public health, water and sanitation infrastructure, power infrastructure, poverty, economy, labour and unemployment and education".[114]

Although many of these effects, particularly displacement, may be a reasonably foreseeable consequence of a particular attack, it is clear that the scope of incidental harm which must be taken into account is limited to loss of civilian life, injury to civilians and damage to civilian objects. As such, even under a broad interpretation of "injury," incidental harm does not include effects such as poverty, unemployment or economic capacity. For example, the US *Law of War Manual* takes a clear position that some economic harm is too remote, although "the death of an enemy combatant might cause economic harm in the form of lost jobs; the attacker would not be required to consider such loss in applying

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110 See L. Gisel, above note 21, p. 120.

111 *Ibid.*

112 Response from Norway, "Responses to Document CCW/GGE/X/WG.1/WP.2, Entitled IHL and ERW, Dated 8 March 2005", CCW/GGE/XI/WG.1/WP.5, 29 July 2005, § 18–19.

113 Report of the Iraq Inquiry, 2016, § 277–278, available at: http://www.iraqinquiry.org.uk/the-report/.

114 According to Reynolds, collateral damage should be understood as both direct and indirect: "Failure to adequately evaluate these definitions suggests a faulty proportionality analysis, a defective effects-based targeting strategy, and a flawed post-conflict reconstruction assessment." See Jefferson D. Reynolds, "Collateral Damage on the 21st Century Battlefield: Enemy Exploitation of the Law of Armed Conflict and the Struggle for a Moral High Ground", *Air Force Law Review*, Vol. 56, 2005, p. 90.

the proportionality rule".[115] That said, some effects – including, for example, displacement – may still be relevant. Indeed, it may be reasonably foreseeable that displacement will result in increased mortality and deteriorating health of displaced persons, which fall squarely within the types of harm that must be taken into account. In addition, reasonably foreseeable displacement may be relevant in determining the weight to be given to destruction of civilian houses in the proportionality assessment.[116] For instance, if it is reasonably foreseeable that incidental destruction of civilian houses will result in large-scale displacement, this may change the value given to the houses when assessing whether the expected incidental damage is excessive in relation to the direct and concrete military advantage.[117]

Geographical scope of "foreseeability"

A final dimension to consider is the geographical scope of the reverberating effects of an attack that must be taken into account by planners and decision-makers. In relation to the use of explosive weapons in populated areas, the incidental effects of an attack will be centred on the impact area of the explosion but may also include significant effects beyond the immediate impact zone. In particular, the interdependency of essential services in populated areas means that such services are vulnerable to the "domino effect" whereby a disruption in one service in the environs of the impact area can disrupt another service far away from it. For example, damage to distribution lines may cut off water supply to a larger number of persons than those in the immediate impact zone.[118] While it is important to recognize that reverberating effects may take place over a wide geographical area, similarly to the temporal scope, it does not seem possible to identify a geographical cut-off point. Rather, it appears more appropriate to focus on which reverberating effects are foreseeable in a particular circumstance. This is reflected in a comment made by Egypt during the Diplomatic Conference of 1974–77, according to which a geographical limitation to the rule on proportionality "introduced a certain ambiguity into the article without necessarily ensuring the protection of civilians, for the loss and the damage had to be considered regardless of the geographical factor so long as the link of causality existed".[119]

Foreseeable reverberating effects of using explosive weapons in populated areas

Having examined the meaning and scope of the obligation to take into account the foreseeable reverberating effects of an attack, what are the implications for the

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115 US Law of War Manual, above note 9, p. 241, §5.12.2.1.
116 L. Gisel, above note 21, p. 124.
117 *Ibid.*
118 See Expert Meeting Report, above note 9, p 15; Urban Services Report, above note 4, pp. 19, 32, 35, 46.
119 Egypt, *Official Records of the Diplomatic Conference on the Reaffirmation and Development of International Humanitarian Law Applicable in Armed Conflicts*, CDDH/III/SR.21, Geneva, 1974–1977, p. 186.

use of explosive weapons in populated areas? Recent armed conflicts have confirmed that using explosive weapons in populated areas has a significant and devastating impact on civilians, including "destruction and damage of civilian residences and critical civilian infrastructure, with consequent disruption to essential services, such as health care and water distribution, and displacement of the civilian population".[120] In particular, the use of explosive weapons in populated areas affects the ability of health-care facilities and services to operate and cope with the influx of wounded people and the injuries they present, and to provide adequate care.[121] It also has a long-term impact on mental well-being.[122] There is growing public awareness of the indirect effects caused by the use of explosive weapons in populated areas.

When explosive weapons are employed in populated areas, the reasonably foreseeable reverberating effects will usually arise from incidental damage to or destruction of civilian objects. Of course, the expected damage/destruction of such objects is relevant as such; but in many cases, such damage/destruction will also entail foreseeable reverberating effects for the civilian population. For example, an attack in a populated area using weapons with large blast and fragmentation effects may be expected to cause incidental damage to components of the electricity network in the area of the attack (e.g. electricity transmission lines or transformers).[123] While the precise effects of the attack would depend on the extent of the damage and the number of people affected, it is reasonably foreseeable that hospitals will be affected (particularly if backup generators are not available), which may lead to loss of civilian life or injury to civilians.[124] Likewise, damage to components of an electricity network may also affect water purification, storage and distribution systems. Damage to such systems can have significant and foreseeable reverberating effects on the health and well-being of the affected civilian population. For example, civilians may lose access to potable water and be forced to access unregulated and alternative water sources, leading to an increased risk of waterborne diseases. Acknowledging this possibility, US Joint Publication 3–60 *(Joint Targeting)* specifically requires that

> [i]f the attack is directed against dual-use objects that might be legitimate military targets but also serve a legitimate civilian need (e.g., electrical power or telecommunications), then this factor must be carefully balanced against the military benefits when making a proportionality determination.[125]

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120 2015 Challenges Report, above note 2, pp. 47–48; Expert Meeting Report, above note 9, p. 4.

121 *Ibid.*, pp. 48 and 14 respectively.

122 *Ibid.*

123 Electricity networks can constitute dual-use objects. See the text at note 21 above, where it is noted that even where the object is rendered a military objective because of dual use, damage to the civilian part of that object, including loss of functionality and foreseeable reverberating effects, must be factored into the proportionality assessment.

124 K. Dörmann, above note 27, p. 17 (referring to the deaths of patients in medical facilities or the long-term disruption of electricity supplies); J. Crawford, above note 6, p. 110 (referring to decreased capacity to care for wounded and sick, and an inability to refrigerate adequate quantities of vaccines and medicines).

125 US Joint Targeting Manual, above note 19, Appendix A, "Legal Considerations in Targeting", p. A-5.

Moreover, essential infrastructure which if damaged or destroyed would have significant reverberating effects for civilians is in most cases located above ground and visible to a trained eye.[126] This means that commanders should normally be aware of civilian infrastructure located in the vicinity of a military objective and should take into account the foreseeable reverberating effects of damaging such infrastructure. Additionally, in many contexts, commanders would have access to information on underground supply networks which must also be taken into account for the purposes of assessing the incidental civilian damage that is expected to result from an attack.

Regarding existing military policy and practice, there is limited information in the public domain on whether (and if so, how) armed forces take into account the reverberating impacts of explosive weapons that have wide area effects. The United Kingdom's *Joint Service Manual of the Law of Armed Conflict* (UK Joint Service Manual) states that "when used against targets in an urban or populated environment, artillery may be expected to cause a lot of incidental damage which would need to be considered in relation to the anticipated military advantage".[127] Moreover, the US Counterinsurgency Manual provides that employing tactics and weapons appropriate to the situation "[i]n some cases … means avoiding the use of area munitions to minimize the potential harm inflicted on non-combatants located nearby".[128] While these policies do not relate specifically to the objectively foreseeable *reverberating effects* of an attack, they provide important examples of policy guidance based on past observations, which effectively put commanders on notice that the use of artillery in a populated area can be expected to cause significant incidental harm.

Further, in requiring that commanders consider the foreseeable effects of an attack for the purpose of the rule on proportionality, the UK Joint Service Manual includes a second noteworthy example. In the context of precision bombing, the Manual notes that if

> an attack of a military fuel storage depot is planned but there is an expectation that the burning fuel will flow into a civilian residential area and cause injury to the civilian population which would be excessive in relation to the military advantage anticipated, that bombardment would be disproportionate and unlawful, owing to the excessive collateral damage.[129]

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126 For example, electricity services are comprised of infrastructure located above ground, such as power stations, transformers and substations, which if damaged or destroyed will have a significant impact on the service and will be more difficult to repair or replace; whereas infrastructure located below ground includes distribution pipes, which can be repaired relatively easily if circumstances permit. See Expert Meeting Report, above note 9, p. 16.
127 UK Joint Service Manual, above note 9, para. 5.32.4. This paragraph was amended in 2011. Prior to the amendment, the Manual read as follows: "Sometimes, especially during fighting in towns, the tactics employed can make a great difference to the control of incidental damage. Artillery fire can cause a lot of incidental damage without any appreciable military advantage."
128 US Counterinsurgency Manual, above note 9, § 7–36.
129 UK Joint Service Manual, above note 9, para. 5.33.4.

Another example is the African Union Mission in Somalia (AMISOM) Indirect Fire Policy, issued in 2011 to incorporate past practices and lessons learned in Somalia. The policy restricted the use of mortars and required a stricter chain of command for authorization of the use of mortar and artillery fire. It also created no-fire zones where civilians were known to be present.[130]

Foreseeable reverberating effects and the obligation to take all feasible precautions in attack

As is noted in the ICRC Commentary to Article 57 of AP I, the rule of precautions in attack is "of greatest importance in urban areas because such areas are most densely populated".[131] With the previous section having set out the conceptual framework and scope of the obligation to take into account the expected incidental damage resulting from an attack, including the reasonably foreseeable reverberating effects, the following section focuses on practical steps to be taken by commanders in order to exercise the objective degree of diligence required in fulfilling their obligations. In particular, this section will examine the feasible precautionary measures required to ensure that the reasonably foreseeable reverberating effects of an attack are adequately assessed. Feasibility is a relative standard which requires that attackers take precautions that "are practicable or practically possible taking into account all circumstances ruling at the time, including humanitarian and military considerations".[132] While not imposing an absolute obligation of conduct, compliance with the rule of precautions in attack is also informed by the standard of the reasonable military commander. This means that attackers must take those measures "that a reasonable attacker would take in the same or similar circumstances" based on information "reasonably available [to the attacker] at the relevant time and place".[133]

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130 See Paul D. Williams, "The African Union Mission in Somalia and Civilian Protection Challenges", S*tability: International Journal of Security and Development*, Vol. 2, No. 2, 2013, p. 11. The tactical directives issued to the International Security Assistance Force in Afghanistan between 2009 and 2012 provide yet another example. The Tactical Directive on Defensive Operations of 6 July 2009 constrained the use of air-to-ground munitions and indirect fire against residential compounds. In August 2010, the Directive was revised to include the requirement that prior to authorizing a strike, commanders must determine that no civilians are present. In November 2011, the Directive was further updated to emphasize that civilians are to be presumed to be present "in every location where there is evidence of human habitation" and that "all compounds are civilian structures until otherwise apparent". A later revision in June 2012 included the requirement to refrain from releasing air-delivered munitions on targets within civilian dwellings.

131 ICRC Commentary to AP I, § 219.

132 Amended Mines Protocol, Art. 3(10); Protocol V on Explosive Remnants of War, Geneva, 28 November 2003 (entered into force 12 November 2006), Art. 5(1). This understanding is shared by a number of States and is included in various military manuals. See, for example, Argentina, *Leyes de la Guerra*, PC-08-01, 1989, approved by Resolution No. 489/89 of the Ministry of Defence, 23 April 1990, § 4.20; Australian Defence Force, *Manual on the Law of Armed Conflict*, Operations Series, ADFP37 – Interim Edition, 1994, p. xxiv; and the interpretive declarations of Belgium, France, Germany, Ireland, Italy, the Netherlands, Spain, the United Kingdom and the United States upon ratification of AP I. All State practice is available on the ICRC online database on customary international humanitarian law.

133 M. N. Schmitt and E. W. Widmar, above note 8, p. 401.

The obligation to refrain from deciding to launch an attack that may be expected to violate the rule of proportionality

The obligation to refrain from deciding to launch a disproportionate attack requires that commanders "do everything feasible to assess whether the attack may be expected" to be disproportionate.[134] This includes doing everything feasible to assess the reasonably foreseeable reverberating effects of the attack.

While the concept of feasible precautions is fairly well established, it is not entirely clear how this obligation translates in practice. Are military commanders obliged to obtain information regarding the location of civilian objects that are critical to the provision of essential services? Is there an obligation to obtain technical expertise or guidance regarding the effects on the civilian population if particular civilian objects are damaged or destroyed? It is clear that the extent to which certain reverberating effects will be foreseeable in part depends on the level of expertise that goes into the assessment of incidental civilian damage. Moreover, should a distinction be drawn between what is considered feasible in a pre-planned attack as compared to an unplanned attack?

Quality and quantity of information

Regarding the quality and quantity of information that is required to assess the reasonably foreseeable reverberating effects of an attack, a number of States have explicitly declared that military commanders must make their decisions on the basis of the information that is available to them at the time of the attack,[135] whilst others have referred to information that is "reasonably available".[136]

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134 ICRC Customary Law Study, above note 12, Rule 18.
135 Algeria, Australia ("on the basis of their assessment of the information from all sources, which is available to them at the relevant time"), Austria ("the information actually available at the time of the decision"), Belgium ("such relevant information as is then available"), Ecuador ("on the basis of an objective and reasonable estimate of the available information"), Egypt ("on the basis of their assessment of all kinds of information available to them at the time"), Germany ("on the basis of all information available to him at the relevant time"), Italy ("on the basis of their assessment of the information from all sources which is available to them at the relevant time"), the Netherlands ("on the basis of their assessment of the information from all sources which is available to them at the relevant time"), Spain ("shall not necessarily be based on anything more than the relevant information available at the relevant time"), the United Kingdom ("on the basis of their assessment of the information from all sources which is available to them at the relevant time") and the United States ("on the basis of an honest and reasonable estimate of the facts available to him").
136 Canada ("on the basis of their assessment of the information reasonably available to them"); Ireland ("on the basis of their assessment of the information from all sources which is reasonably available to them at the relevant time"); New Zealand ("on the basis of their assessment of the information from all sources which is reasonably available to them at the relevant time"); UK Joint Service Manual, above note 9, para. 5.20.4, note 79 ("assessment of what is expected is based on information from all sources which is reasonably available to them at the relevant time"), referring to the UK Statement upon ratification of AP I. The US Naval Handbook, above note 19, para. 8.3.1, states: "[T]he commander must decide, in light of all the facts known or reasonably available to him, including the need to conserve resources and complete the mission successfully, whether to adopt an alternative method of attack, if reasonably available, to reduce civilian casualties and damage." Ecuador's naval manual (Ecuador, *Aspectoc importantes del derecho international maritimo que deben tener presente los comandantes de los buques*, Academia de Guerra Naval, 1989), para. 8.1.2.1, states: "The commander must determine whether

In reference to a standard of reasonableness, Rogers takes the view that the test "will depend to some extent on the amount of information readily available, the staff at hand to deal with it and whether that information raises questions that require further research of other sources of information".[137] In addition, a number of military manuals require commanders to obtain "the best possible intelligence"[138] regarding aspects relevant to the assessment of incidental damage. For example, Australia's *Law of Armed Conflict Manual* requires the best possible intelligence concerning "concentrations of civilians; civilians who may be in the vicinity of military objectives; [and] the nature of built-up areas such as towns, communities, [and] shelters".[139] Although not explicitly specified, such an approach may require not only information regarding the location of essential infrastructure but also an understanding of the interconnectedness of essential services.

Practically speaking, it may be possible in some cases for militaries to obtain information relating to the location of essential civilian infrastructure and supply networks, including primary infrastructure (e.g. water distribution networks, water treatment plants, electricity generating plants) as well as secondary and tertiary infrastructure (e.g. transmission lines or sub-transformers). Availability of this kind of information will vary depending on the context: in some situations it may be publicly available (including online), while in other cases, particularly in the early stages of an operation, such information might not be easily accessible. In this regard, it should be noted that essential civilian infrastructure will typically be located at ground or above-ground level and will thus be visible to an expert eye (e.g. civil engineer).[140]

Assessments of the foreseeable reverberating effects of an attack are likely to require technical expertise, including from engineers and/or public health experts. For example, in relation to computer network attacks, the Tallinn Manual recommends that where feasible, technical experts should be available to assist mission planners in determining whether appropriate precautionary measures have been taken.[141] In the view of Droege, in the absence of such expertise, it

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incidental injuries and collateral damage would be excessive, on the basis of an objective and reasonable estimate of the available information." Canada and Ireland, in their declarations upon ratification of AP I (20 November 1990 and 19 May 1999 respectively), stated that "military commanders and others responsible for planning, deciding upon or executing attacks" must "reach decisions on the basis of their assessment of the information" that is "reasonably available to them at the relevant time", and that "such decisions cannot be judged on the basis of information which has subsequently come to light").

137 A. P. V. Rogers, above note 58, p. 151.

138 Benin, *Military Manual*, 1995 ("Military commanders must inform themselves about concentrations of civilian persons, important civilian objects and specially protected facilities, the natural environment and the civilian environment of military objectives."); *France's LOAC Summary Note*, 1992 ("Commanders are responsible for the consequences for civilians of the military actions they take. They must, prior to any action, obtain a maximum of information concerning the nature and the location of protected objects (medical units, cultural objects, installations containing dangerous forces) and concerning any concentration of civilians.").

139 *Australia's LOAC Manual*, 2006.

140 See Expert Meeting Report, above note 9, p. 16.

141 Tallinn Manual, above note 8, p. 166, § 6 ("Given the complexity of cyber operations, the high probability of affecting civilian systems, and the sometimes limited understanding of their nature and effects on the part of those charged with approving cyber operations, mission planners should, where feasible, have

may even be necessary for the attacker to refrain from the computer network attack.[142] In the context of urban warfare, Boothby also implies that an assessment of the expected incidental damage should involve technical expertise: when attacks in urban areas

> may be expected to damage utilities on which the civilian population relies, an assessment should be made of how long it is likely that the relevant services will remain out of action and what damage, injury, and death civilians are likely to suffer during that period as a result.[143]

As noted by one expert, "a war-fighter does not normally have the necessary training to assess the public health risks of an attack".[144] Thus, it will normally be necessary to incorporate specialists into targeting assessments.

In practice, some militaries already incorporate engineering expertise into targeting processes, in order to provide expertise on the physical impact of certain weapons on targeted buildings.[145] In addition, the US Army *Field Manual on Intelligence Support to Urban Operations* refers to the role for engineers in assessing "potential collateral damage by analysing risks of damage caused by the release of dangerous forces, power grid and water source stability, and the viability of sewage networks".[146]

More generally, it appears that some States have policy guidance and processes which require detailed analysis of essential infrastructure, which could feasibly be used for the purpose of assessing the expected incidental harm, including the foreseeable reverberating effects, of an attack. For example, the US manual *Joint Urban Operations* (US Joint Urban Operations Manual) emphasizes the importance of "critical infrastructure analysis" during the planning phase of an operation:

> Critical infrastructure analysis is a combination of intelligence preparation, the targeting process, and staff planning. Its purpose is to examine closely the nature of the infrastructure systems and their components …. The initial steps in the critical infrastructure analysis will identify certain infrastructure to be preserved, protected, or to which damage should be minimized …. The targeting process should recognize the facilities or structures to be protected

technical experts available to assist them in determining whether appropriate precautionary measures have been taken.").

142 C. Droege, above note 7, p. 574.

143 W. H. Boothby, above note 18, p. 414.

144 See University Centre for International Humanitarian Law Geneva, *Expert Meeting on "Targeting Military Objectives"*, report, 12 May 2005, p. 15.

145 See, for example, Expert Meeting Report, above note 9, p. 29 (one speaker said that "in terms of analyzing the data that are available, in particular as regards foreseeing secondary fragmentation, some militaries routinely incorporate the technical expertise of a structural engineer"). See also *ibid.*, p. 33 ("UPDF also carries out BDAs, which involve intelligence analysts, field engineers, weapon experts and target analysts.").

146 Department of the Army, *Field Manual on Intelligence Support to Urban Operations*, FM 2-91.4, March 2008, p. 3–2, available at: http://fas.org/irp/doddir/army/fm2-91-4.pdf.

and give careful consideration to potential collateral damage resulting from attacks on nearby targets.[147]

Although the US Joint Urban Operations Manual does not define "critical infrastructure", it notes that systems and facilities may be selected for analysis for several reasons, including "[i]nfrastructure whose destruction would cause hardship for civilians".[148] Other States such as Israel and Norway also give specific attention to the importance of minimizing damage to civilian infrastructure.[149] If the impact of warfare on essential infrastructure is already the subject of intensive intelligence gathering and analysis, the gathering of such intelligence is at least in some circumstances considered feasible, and should in those circumstances also inform the assessment of the expected incidental damage, including the foreseeable reverberating effects.

It is not entirely clear how militaries assess the foreseeable reverberating effects of an attack. However, it appears that this may occur in part through the use of advanced CDM processes. For example, the US CDM requires both an environmental damage assessment and an assessment of the chemical, biological and radiological (CBR) Plume Hazard for each attack,[150] noting that "special consideration must be given to the secondary and tertiary effects of engaging these types of targets".[151] Likewise, the US CDM requires special consideration of dual-use facilities, meaning "those valid military targets characterized as serving both a military and civilian (i.e. non-combatant) purpose/function".[152] Aside from attacks on dual-use facilities, it remains unclear if and how the US CDM includes an assessment of the foreseeable reverberating effects of attacks on other military objectives. Although it has not been possible to access CDM used by other militaries, it should be noted that the 2009 Australian military manual makes it clear that the collateral effects of an attack – including second- and third-order consequences which are unintended – "should be a major,

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147 US Joint Chiefs of Staff, *Joint Urban Operations*, JP 3-06, 20 November 2013 (US Joint Urban Operations Manual), pp. III-8–III-9. The Manual also states that "[a]n analysis of the threat is essential as is detailed intelligence and information on the physical terrain and infrastructure characteristics of the urban environment" (p. I-8).

148 *Ibid.*

149 See, for example, Israel, *The Low Intensity Conflict: The Combat against Irregular Forces*, Ground 10–29, 2005, p. 91 ("To the extent possible, all impact should be avoided to water, power, sewage and communication infrastructures …. All such damage should be reduced to the minimum, with means also provided as required to repair the damages."); Royal Army of the Netherlands, *The Humanitarian Law of War: A Manual*, 2005, § 1221 ("Damage to infrastructure and civilian casualties must be avoided or, in any case, kept to a minimum.").

150 According to the US no-strike process and CDM, CBR Plume Hazards include "nuclear, biological or chemical production/storage facilities; nuclear power plants; fertilizers, pharmaceutical, pesticide/ herbicide production/storage facilities". See US Chairman of the Joint Chiefs of Staff, above note 80, Appendix A to Enclosure D, p. D-A-9.

151 *Ibid.*, Appendix A to Enclosure D, p. D-A-34. As noted above, the rationale for requiring special consideration is that "[e]nvironmental hazard targets present the significant danger of widespread and long-term lethal effects on civilians and non-combatants from ground water contamination, flooding, uncontrollable fire, and spread of disease".

152 *Ibid.*, Enclosure B, p. B-7.

deliberate consideration in planning, executing, and assessing military actions on any scale".[153]

Pre-planned attacks vs. unplanned attacks

An issue related to the quantity and quality of information that a commander can feasibly be expected to take into account when analyzing the expected incidental damage of an attack is the relevance of the operational context. In a pre-planned attack, it might be both feasible and reasonable for commanders to consult experts prior to the attack, such as their medical or engineering branch, in order to estimate the incidental damage of the attack. Such information will likely render certain reverberating effects foreseeable that would not be foreseeable in unplanned operations. In a "troops-in-contact" (TIC) scenario, where friendly forces are under effective fire,[154] a reasonable commander would not be expected to proactively engage in extensive intelligence gathering before responding to incoming rounds, although pre-existing knowledge would still need to be taken into account. In unplanned operations other than TIC scenarios, where friendly forces are not in immediate danger but where "dynamic targeting" is employed to pursue a militarily important target of opportunity,[155] the military considerations weighing in favour of an immediate engagement are likely tempered to a greater extent than in TIC scenarios by the precautionary obligation to proactively gather information prior to an attack in order to inform the estimation of incidental damage.

While the condition of feasibility introduces some malleability into the rule of precautions in attacks, thereby accommodating different operational realities,[156] it does not altogether suspend the IHL obligation to take precautions in attack. Feasibility explicitly refers to military and *humanitarian* considerations. Thus, even in TIC situations, the attacker must gather a reasonable amount of information to inform his or her decision and must take into account those reverberating effects that are reasonably foreseeable,[157] including based on prior knowledge of the operational environment, training and past experiences.[158] For

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153 Australian Department of Defence, *Australian Defence Doctrine Publication 3.14 on Targeting*, ADDP 3.14, 2 February 2009, § 1.21. Collateral effects are defined as follows: "A collateral effect is not damage to a target or any directly associated collateral damage to the immediate area, rather they are any effect (s) achieved beyond those for which the action was undertaken." See also § 1.24.

154 See Eric C. Husby, "A Balancing Act: In Pursuit of Proportionality in Self-Defense for On-Scene Commanders", *The Army Lawyer*, Vol. 6, 2012, p. 6; Marc Garlasco, *Troops in Contact: Airstrikes and Civilian Deaths in Afghanistan*, Human Rights Watch, 8 September 2008; J. Alexander Thier and Azita Ranjbar, *Killing Friends, Making Enemies: The Impact and Avoidance of Civilian Casualties in Afghanistan*, briefing, United States Institute of Peace, July 2008, p. 2; Winston S. Williams Jr., "Multinational Rules of Engagement: Caveats and Friction", *The Army Lawyer*, Vol. 24, 2013, p. 27, note 34.

155 In US doctrine, dynamic targeting refers to the targeting process for current operational planning (current twenty-four hours), where the timing is such as to require a more immediate response than deliberate targeting allows for. See US Joint Targeting Manual, above note 19, p. x.

156 See W. H. Boothby, above note 18, p. 123.

157 See E. C. Husby, above note 154, pp. 12–13.

158 See, for example, Richard Jackson, "Empirical Approaches to the International Law of War", *Willamette Journal of International Law and Dispute Resolution*, Vol. 16, 2008, p. 292.

instance, the on-scene commander should be trained on the general effects of the weapon system being used and should be able to reference training and intelligence relating to demographics, typical civilian patterns of life and types of structures commonly occupied by civilians.[159] The rule of precautions in attack is violated where feasibly available information is not obtained or is ignored, irrespective of the operational context.[160]

The obligation to take all feasible precautions in the choice of means and methods of attack

Commanders are obliged to take all feasible precautions in the choice of means and methods of attack with a view to avoiding or minimizing the expected incidental harm,[161] including the reasonably foreseeable reverberating effects of an attack. Compliance with this obligation will of course depend on the particular context, but will require assessment of the foreseeable effects of the available weapon systems, in view of their technical characteristics and the expected circumstances of their use. This should also include consideration of the way in which the technical features of each weapon can be manipulated, so as to minimize the foreseeable direct and indirect effects on civilians, including the type and size of the warhead, the type of fuse, the delivery system, the distance from which the weapon is launched, as well as the angle and timing of the attack.[162]

In this respect, it should be noted that technological development has rendered measures that were militarily unfeasible in the past, feasible today. Schmitt has suggested that increasing attention on reverberating effects is in part due to technological developments in targeting capabilities: "Of course, reverberating effects were theoretically always calculated when assessing proportionality. However, it is only now that the means exist to limit dramatically direct collateral damage and incidental injury that we are being sensitized to reverberation."[163] In other words, reverberating effects are now more relevant because new technology – including precision-guided missiles – enables attackers to be more precise in limiting the reverberating effects of an attack. A similar line of argument can also be applied to advanced CDMs, which use physics-based computer modelling to estimate and mitigate incidental civilian harm.[164] Indeed, the existence and use of more

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159 See, for example, E. C. Husby, above note 154, p. 13.
160 Boothby writes that "[i]f the relevant information is reasonably available to the decision-maker, he is required to take it into account when determining whether the intended attack would be lawful". W. H. Boothby, above note 18, p. 172.
161 AP I, Art. 57(2)(a)(ii); ICRC Customary Law Study, above note 12, Rule 17. See also M. N. Schmitt and E. W. Widmar, above note 8, p. 402; and Italy's *LOAC Elementary Rules Manual*, 1997, which states: "To restrict civilian casualties and damages, the means of combat and weapons shall be adapted to the target."
162 2015 Challenges Report, above note 2, p. 50; Expert Meeting Report, above note 9, pp. 5, 24–26. See also ICRC Commentary to AP I, Article 57(2)(a)(ii), § 2200, which notes that the "precision and range" of the available weapons "should be taken into account."
163 Michael N. Schmitt, "The Principle of Discrimination in 21st Century Warfare", *Yale Human Rights and Development Journal*, Vol. 2, 1999, p. 168.
164 See, for example, the US CDM, also used during NATO combat operations: Chairman of the Joint Chiefs of Staff, above note 80.

sophisticated means of measuring incidental damage has increased the capacity of commanders to calculate the reverberating effects of an attack, thereby making them more relevant.[165]

This is an interesting approach to the issue, and it is indeed true that greater accuracy in weapons systems or greater capacity to calculate incidental damage may increase the possibility to minimize the reverberating effects of an attack.[166] However, it must be emphasized that the obligation to incorporate the foreseeable reverberating effects of an attack into targeting assessments is not dependent on the level of technology of a party to an armed conflict. Even militaries that are not using precision weapons and sophisticated means of measuring incidental damage can assess the foreseeable reverberating effects of an attack, particularly when using explosive weapons with a wide impact area in populated areas. This is especially true in the case of reverberating effects resulting from incidental damage to civilian objects. As most essential infrastructure is located at ground or above-ground level, it is visible to a trained eye and must be taken into account when assessing the foreseeable reverberating effects of an attack, regardless of technological developments in targeting capabilities. Additionally, an assessment of the foreseeable reverberating effects of an attack should be informed by lessons learned from previous conflicts and what is known in the public domain about the environment surrounding the target, and about the effects of specific weapons, including explosive weapons with a wide impact area. Thus, while technology may allow for a more demanding threshold regarding what is feasible or foreseeable, the obligation to take into account the reverberating effects of an attack is not dependent on having sophisticated technology such as precision-guided munitions or a sophisticated CDM process.

One question arising from the interpretation of this rule is whether it requires the employment of precision-guided munitions. This question is particularly relevant to the use of explosive weapons that are prone to wide area effects in populated areas. As the law currently stands, the answer to this question is somewhat nuanced. Despite arguments to the contrary,[167] there is no existing legal obligation to acquire the most precise weapons available on the market, or, once obtained, to use precision-guided munitions in all situations.[168] However, where such weapons are available, and their use is feasible, and they would allow the attacking party to avoid or minimize the expected incidental harm (including the reasonably foreseeable reverberating effects), they should be used.[169] Accordingly, Dinstein notes that if an attack is planned on "a small military objective located in the middle of a densely populated civilian area, the

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165 L. Gisel, above note 21, p. 128.
166 *Ibid.*
167 See, for example, Stuart W. Belt, "Missiles over Kosovo: Emergence, *Lex Lata*, of a Customary Norm Requiring the Use of Precision Munitions in Urban Areas", *Naval Law Review*, Vol. 47, No. 115, 2000.
168 Y. Dinstein, above note 10, p. 170; M. N. Schmitt and E. W. Widmar, above note 8, p. 402.
169 Jean-Francois Quéguiner, "Precautions Under the Law Governing the Conduct of Hostilities", *International Review of the Red Cross*, Vol. 88, No. 864, 2006, p. 803.

only modus operandi minimizing the expected collateral damage to civilians *may* be the employment of [precision-guided munitions]".[170] In a similar vein, Schmitt suggests that the obligation to minimize incidental damage may be complied with through the use of low-collateral weapons such as carbon filament bombs, which "can be used to interrupt electricity with far less collateral damage than regular bombs".[171] That being said, it must be emphasized that while precision-guided munitions or other sophisticated weapons may increase the capacity of the attacker to minimize the expected incidental harm of an attack, the use of such technology does not ensure compliance with the rule on proportionality in attack. Large precision-guided explosive munitions are also prone to indiscriminate effects due to their wide blast and fragmentation range. Regardless of the type of weapon used, if an attack is expected to be disproportionate, the commander must refrain from launching, or must suspend or cancel, the attack.

Regarding the use of less precise explosive weapons in populated areas, the obligation to minimize incidental casualties or damage to civilian objects may also trigger precautionary measures such as the establishment of no-fire zones or restrictions on the types of situations in which particular weapons can be used. For example, the 2011 US Army manual *Combined Arms Operations in Urban Terrain* (US Combined Arms Manual) notes that in regard to the use of field artillery in operations in urban terrain, "restrictive fire support coordination measures, such as a restrictive fire area or no-fire area may be imposed to protect civilians and critical installations".[172] Similarly, the 2013 US Joint Urban Operations Manual indicates several precautionary measures that can be taken in relation to the use of weapons fire in urban environments, including "restricting munitions used in the attacks" and "aborting attacks unless accuracy can be guaranteed".[173] Another prominent example is the restrictions on high-explosive (HE) artillery that were put in place by the Israeli Defence Force (IDF) during the armed conflict in Gaza in 2014.[174] Although Israel was clear to underline that these directives were going beyond the requirements of IHL, they put in place a general prohibition on the use of HE artillery shells in populated areas and required the observance of specified "safety margins".[175] Accordingly, HE artillery could only be used in populated areas on an exceptional basis where there was "an imperative military necessity for artillery fire support".[176] These examples are illustrative of a certain acknowledgement by some armed forces of the fact that certain explosive weapon systems may be expected to result in substantial incidental damage when used in populated areas.

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170 Y. Dinstein, above note 10, p. 169. Emphasis added.
171 M. N. Schmitt and E. W. Widmar, above note 8, p. 402. Schmitt also emphasizes that such weapons will reduce collateral damage whilst obtaining the same military advantage.
172 US Department of the Army, *Combined Arms Operations in Urban Terrain*, ATTP 3-06.11, June 2011 (US Combined Arms Manual), p. 12–4.
173 US Joint Urban Operations Manual, above note 147, p. IV-16. It should be noted that these measures are framed as ways of reducing operational- and tactical-level implications, rather than as a legal obligation.
174 State of Israel, above note 66, para. 354.
175 *Ibid.*
176 *Ibid.*

Aside from the choice of weapon, a particularly important aspect of complying with this obligation is the ability to manipulate the technical features of the chosen weapon system, in order to minimize incidental civilian harm, including foreseeable reverberating effects. For example, choices regarding the warhead, type of munition[177] and fusing can be made in order to minimize the effects of the attack on civilians and civilian objects located within the impact area.[178] In this regard, the US Combined Arms Manual places specific restrictions on the use of fuses on mortars in an urban environment: "When using HE ammunition in urban fighting, only point-detonating fuzes should be used. The use of proximity fuzes normally should be avoided because the nature of urban areas causes proximity fuzes to function prematurely."[179] Policy directives regarding fusing were also implemented by the IDF during the 2014 conflict in Gaza whereby "in certain cases, the IDF employed delay fuses for bombs to detonate deep inside targets, to limit damage to adjacent structures".[180] Considerations such as warhead type and fusing are also incorporated into the CDM used by several militaries.[181]

In addition, parties to an armed conflict should take feasible precautions in relation to the angle of attack.[182] This is extremely important, particularly in densely populated areas, as the angle of an attack will influence the extent and direction of secondary fragmentation resulting from the attack – i.e., gravel, cement, wood,

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177 See, for example, Kenya, *LOAC Manual*, 1997: "the destructive power of the ammunition used (quantity, ballistic data, precision, point or area covered, possible effects on the environment) should especially be taken into account".

178 Expert Meeting Report, above note 9, p. 25.

179 US Combined Arms Manual, above note 172.

180 State of Israel, above note 66, para. 312.

181 For example, the US CDM – also used by NATO – requires a weaponeering analysis "which determines appropriate delivery systems, warhead, and fuze combinations that mitigate the risk of collateral damage while still achieving the desired effect on the target". The US CDM is modelled around five questions, one of which is "Can I mitigate damage to those collateral concerns [including collateral objects] by striking the target with a different weapon or with a different method of engagement, yet still accomplish the mission?" Similarly, the Australian CDM provides that "for infrastructure targets, the assessment will consider the size, shape and construction of protected facilities, weapon type, size and accuracy, and blast and fragmentation radii". See Australian Department of Defence, above note 153, pp. 4–8. The CDE Methodology used by the Australian military is detailed further in *ADFP 3.14.2 Targeting Procedures*, but this is not publicly available. See also Chairman of the Joint Chiefs of Staff, above note 80, pp. D-A-18, D-A-7.

182 J.-F. Quéguiner, above note 169, p. 800; Y. Dinstein, above note 10, p. 143. Precautionary measures regarding the timing and angle of attack are explicitly identified in a number of military manuals. See the Netherlands, *Military Manual*, 2005, § 0542 ("Thought must be given to the choice of methods or techniques of attack, resources (weapons and weapon systems), timing, and whether or not to warn the civilian population."); State of Israel, *The Operation in Gaza (27 December 2008–18 January 2009): Factual and Legal Aspects*, 29 July 2009, § 258 ("to the extent feasible, the IDF timed attacks on targets so as to cause minimum collateral damage. For example, buildings normally occupied only during daylight hours, and military targets which were located in proximity to such buildings, were struck at night."); Kenya, *LOAC Manual*, 1997 ("The direction and the moment of the attack shall be chosen so as to limit civilian casualties and damage (e.g. attack of factory after normal working hours)."); Ukraine, *IHL Manual*, 2004, § 2.3.3.2. ("Direction and time of offensive action shall be chosen in order to minimize human casualties and destruction of civilian objects, e.g. fire damage to an enemy military plant after the end of its working hours.").

rocks, glass and metal which may be projected out by the blast wave.[183] By carefully managing the angle of attack, fragmentation effects can be shaped and mitigated so as to reduce the risk of civilian casualties and damage to civilian objects.[184] For example, by changing the angle of attack against a particular military objective in a populated area, it may be possible to ensure that secondary fragmentation is projected upwards or in the direction of an uninhabited block, rather than in the direction of a medical clinic. As the angle of attack is usually incorporated into CDM or other means of preparing an attack, in most cases it will be feasible to take such precautions.[185]

Finally, the obligation to take all feasible precautions in the choice of means and methods of attack can also "impose restrictions on the location of an attack, by requiring, where circumstances permit, that parties avoid attacking a densely populated area if the attack is likely to cause heavy civilian losses".[186] Indeed, in some cases, where there are no alternative means or methods of attack which would minimize incidental civilian damage, the only feasible option is to refrain from launching an attack that would be disproportionate or indiscriminate. Although framed as a way of reducing operational- and tactical-level implications (rather than as a legal obligation), this precautionary measure is reflected in the US Joint Urban Operations Manual in relation to the use of weapons fire in urban environments. Acknowledging that the presence of civilians can severely inhibit the use of weapons fire, the Manual refers to several measures that can be taken, including "prohibiting attacks on targets located in heavily populated areas".[187]

Conclusion

Although the rules on proportionality and precautions in attack require that reverberating effects are taken into consideration for all attacks, this obligation is particularly relevant in the context of attacks involving the use of explosive weapons that have wide area effects in a populated area. Indeed, recent conflicts have shown that when explosive weapons with a large destructive radius, an inaccurate delivery system or the capacity to deliver multiple munitions over a wide area are used in populated areas, there is a high likelihood that civilians will be killed and injured, and essential civilian infrastructure will be damaged or destroyed, with consequent disruption in essential services and subsequent effects on the lives and well-being of the civilian population.

In fleshing out its contextual scope and framework, this article has argued that the obligation to take into account the reasonably foreseeable reverberating effects of an

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183 Expert Meeting Report, above note 9, pp. 11, 27.
184 *Ibid.*, p. 5; Kenneth Cross, Ove Dullum, N. R. Jenzen-Jones and Marc Garlasco, *Explosive Weapons in Populated Areas: Technical Considerations Relevant to their Use and Effects*, report, Armament Research Services, Australia, May 2016, p. 42.
185 *Ibid.*, p. 42; Expert Meeting Report, above note 9, p. 6.
186 J.-F. Quéguiner, above note 169, p. 800.
187 US Joint Urban Operations Manual, above note 147, p. IV-16.

attack derives from the requirement to estimate the "expected" incidental damage of an attack when applying the rules of proportionality and precautions in attack. This obligation imposes an objective standard of care, based on the standard of the "reasonable commander". This implies that commanders must take into account those reverberating effects that are reasonably foreseeable in the circumstances ruling at the time, in light of the reasonably available information. Moreover, the objective standard of "reasonable foreseeability" means that commanders are put on notice regarding reverberating effects that may be considered reasonably and objectively foreseeable based on past practice and empirical research, lessons learned and publicly available information, including information about the reverberating effects of using explosive weapons in populated areas.

The obligation to take into account the reasonably foreseeable reverberating effects of an attack is reinforced by the precautionary obligation to refrain from launching a disproportionate attack, which imposes a duty to proactively gather information that will inform the assessment of the expected incidental damage of the attack. This includes, where feasible, obtaining information regarding the location and nature of essential infrastructure and ensuring that relevant technical experts are involved in assessing the expected incidental harm of an attack. While the operational context might impact the extent to which a commander is expected to proactively gather information to inform the estimation of incidental damage, a commander may never ignore reasonably available information, including such information that renders the reverberating effects of an attack reasonably foreseeable.

Additionally, all feasible precautions must be taken in the choice of means and methods of attack, by assessing the foreseeable effects of particular weapons, including reverberating effects, on the basis of their technical characteristics and the expected circumstances of their use. Feasible precautions include manipulating the technical features of explosive weapons such as the type of fuse and the type/ size of the warhead, as well as considering the timing, angle and location of the attack. Yet even such precautions may not be sufficient to obviate the wide area effects of certain explosive weapons. In such cases, the only option may be to refrain from using the weapon, if its use is likely to lead to a violation of the prohibition on indiscriminate and disproportionate attacks.

As is the case currently for some militaries, policy guidance should be put in place to identify which kinds of precautions in attack can and should be implemented, in order to assess and minimize the reverberating effects of an attack using explosive weapons in populated areas, building on good practices already applied by a number of militaries. Likewise, when it is reasonably foreseeable that using a particular explosive weapon in a populated area will result in excessive incidental civilian harm, military manuals and policy should set out clear restrictions on the use of those weapons in populated areas. Although it is not possible to foresee and limit all of the possible effects of an attack, a lot more can be done to better understand the reverberating effects of an attack using explosive weapons in populated areas and to develop policy guidance setting out if and how such weapons should be used.

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Precautions against the effects of attacks in urban areas

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Abstract

The conduct of hostilities in urban areas is inherently difficult, particularly with respect to the protection of civilians. International humanitarian law places restraints on both attackers and defenders. While much is written about the obligations of attackers with respect to protecting civilians, much less attention has been paid to the defender's obligations. These obligations are routinely referred to as "passive precautions" or "precautions against the effects of attacks" and are codified in Article 58 of Additional Protocol I to the 1949 Geneva Conventions. Article 58 requires parties, "to the maximum extent feasible", to remove civilians and civilian objects from the vicinity of military objectives, to avoid locating military objectives within or near densely populated areas, and to take other necessary precautions to protect civilians and civilian objects from the dangers resulting from military operations.

Even though they are limited by only requiring those actions which are feasible, the obligations placed on the defender are far from trivial and, if applied in good faith, would certainly provide much needed protections to civilians in armed conflict, particularly in times of urban conflict. However, this ever-increasing urbanization is creating significant pressure on the doctrine of precautions in defence, stretching the "feasibility" standard beyond its capacity to adequately protect civilians. On the other hand, the emergence of advanced technology provides a mechanism for

defenders to more easily and more fully comply with their obligations to segregate or protect the civilian population.

For the customary obligation of "precautions against the effects of attacks" to maintain its effectiveness, particularly in urban areas of conflict, the understanding of feasibility and what is "practicable" in current urbanized armed conflicts will have to expand, increasing the practical responsibilities on the defender, including through the use of modern technology. Moreover, imposing criminal responsibility when appropriate and feasible precautions are not taken will rectify the perceived imbalance between the responsibilities of the attacker and those of the defender.

Keywords: international humanitarian law, precautions, defender, civilians, protections, technology, criminal responsibility.

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Introduction

An article in *The New York Times* by Matthew Rosenberg and Eric Schmitt highlights one of the many vexing problems of modern warfare: adhering to the principle of distinction while still effectively engaging in armed conflict. Writing about the fight against Daesh[1] in Syria, Rosenberg and Schmitt describe this problem as confronted by US military planners:

> For months, the United States military has known that the Islamic State uses the city hall in Raqqa, Syria, as an administrative center and a dormitory for scores of fighters. Some American officials even believe that Abu Bakr al-Baghdadi, the group's leader, may have been in the building at times.
>
> Yet, despite the American air campaign against the Islamic State, the white, three-story building remains standing because it also houses a jail.[2]

The unwillingness of the United States, and many other nations, to engage in aggressive targeting of Daesh fighters is magnified by the urban nature of the

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1 I will use the term Daesh to describe what Rosenberg and Schmitt refer to as the Islamic State.
2 Matthew Rosenberg and Eric Schmitt, "In ISIS Strategy, U.S. Weighs Risk to Civilians", *The New York Times*, 19 December 2015, available at: www.nytimes.com/2015/12/20/us/politics/in-isis-strategy-us-weighs-risk-to-civilians.html?_r=0 (all internet references were accessed in December 2016). The article continues:
> Its inmates are mainly victims of the extremist group – men caught sneaking a cigarette, women spotted with clothes that reveal even a hint of skin, shop owners who failed to pay their bills – and for American officials, the risk of killing any of them in an airstrike is too high.
> The same is true of six other nearby buildings, including a mosque and court complex, which, together with city hall, compose the closest thing the Islamic State has to a headquarters.
> … But Mr. Obama also acknowledged the dilemma the United States and its allies face in Raqqa and other urban areas in Syria and Iraq, noting that the Islamic State "is dug in, including in urban areas, and they hide behind civilians.["]

conflict and the almost inevitable intermixing, whether intentional or not, of civilians and fighters.[3]

The conduct of hostilities in urban areas is inherently difficult, particularly with respect to the protection of civilians. Separating military operations and targets from the civilian population is hard in almost any environment, but the density of civilians and civilian objects such as homes and other buildings in urban environments dramatically magnifies the risks to non-participants in hostilities. Indeed, the roads, sewers, transportation systems, observation points, food distribution points and clean water sources that support the large civilian population – the very infrastructure of cities – are also vital for military operations, and hence become military targets. The significantly increased number of "dual-use" objects in urban areas, and the heightened number of civilians that use them, highlight the perils populations face in urban warfare.

In order to mitigate the risk to civilians, international humanitarian law (IHL) places restraints on attackers such as the United States in the Rosenberg and Schmitt article quoted above, commonly referred to as "precautions in attack".[4] In addition, however, those fighters defending urban areas also have legal obligations. These obligations are known as "precautions against the effects of attacks" and are codified in Article 58 of Additional Protocol I to the 1949 Geneva Conventions (AP I).[5] Article 58 requires parties, "to the maximum extent feasible",[6] to remove civilians and civilian objects from the vicinity of military objectives, to avoid locating military objectives within or near densely populated areas, and to take other necessary precautions to protect civilians and civilian objects from the dangers resulting from military operations.

This specific provision of the law is binding only on States party to AP I and only in international armed conflicts,[7] but the International Committee of the Red Cross (ICRC) argues that it is considered part of customary international law[8] as an

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3   Matthew C. Waxman, *International Law and the Politics of Urban Air Operations*, RAND Corporation, Santa Monica, CA, 2000, p. 16, where the author states: "The density of civilian populations in urban areas increases the chances that even accurate attacks will injure noncombatants. In addition, the collocation of military and civilian assets in urban environments multiplies the chances that military attacks will cause unintended, and perhaps disproportionate, civilian damage."

4   See Protocol Additional (I) to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts, 1125 UNTS 3, 8 June 1977 (entered into force 7 December 1978) (AP I), Art. 57.

5   *Ibid.*, Art. 58.

6   *Ibid.*

7   A similar provision which was proposed for Additional Protocol II to the 1949 Geneva Conventions was rejected by the States negotiating the Protocol. See Jean-Marie Henckaerts and Louise Doswald-Beck (eds), *Customary International Humanitarian Law*, Vol. 1: *Rules*, Cambridge University Press, Cambridge, 2005 (ICRC Customary Law Study), Rule 22.

8   *Ibid.*, Rules 22–24; Michael N. Schmitt, Charles H. B. Garraway and Yoram Dinstein, *The Manual on the Law of Non-International Armed Conflict With Commentary*, International Institute of Humanitarian Law, San Remo, 2006, reprinted in Yoram Dinstein and Fania Domb (eds), *Israel Yearbook of Human Rights*, Vol. 36, 2006, para. 2.3.7; Yoram Dinstein, *The Conduct of Hostilities under the Law of International Armed Conflict*, 2nd ed., Cambridge University Press, Cambridge, 2010, p. 145; Christopher Greenwood, "Customary International Law and the First Geneva Protocol of 1977 in the Gulf Conflict", in Peter Rowe (ed.), *The Gulf War 1990–91 in International and English Law*, Routledge, New York and London, 1993, p. 86. Note that the International Group of Experts which

application of the principles of distinction[9] and proportionality.[10] Article 58's customary status has also been accepted in international criminal litigation.[11] The new US Department of Defense *Law of War Manual* (US Law of War Manual) does not acknowledge Article 58 as customary international law but does argue that:

> Outside the context of conducting attacks (such as when conducting defense planning or other military operations), parties to a conflict should also take feasible precautions to reduce the risk of harm to protected persons and objects from the effects of enemy attacks. In particular, military commanders and other officials responsible for the safety of the civilian populations must take reasonable steps to separate the civilian population from military objectives and to protect the civilian population from the effects of combat.[12]

This language highlights the United States' understanding of the obligations set out in Article 58, including their obligatory nature.

Even though they are limited by only requiring those actions which are feasible, the obligations placed on the defender are far from trivial and, if applied

produced the *Tallinn Manual on the International Law Applicable to Cyber Warfare* "took the position that the Rule's application was limited to international armed conflicts". Michael N. Schmitt (ed.), *Tallinn Manual on the International Law Applicable to Cyber Warfare*, International NATO Cooperative Cyber Defence Centre of Excellence, Cambridge University Press, Cambridge, 2013 (Tallinn Manual), p. 176.

9   ICRC Customary Law Study, above note 7, Rules 23–24. See also Jean-Francois Queguiner, "Precautions Under the Law Governing the Conduct of Hostilities", *International Review of the Red Cross*, Vol. 88, No. 864, 2006, pp. 820–821, where the author states: "Contrary to what is sometimes maintained, Additional Protocol I does not introduce a fundamental imbalance between the precautions required of the defender and those required of the attacker. Responsibility for applying the principle of distinction rests equally on the defender, who alone controls the population and objects present on his territory, and on the attacker, who alone decides on the objects to be targeted and the methods and means of attack to be employed. Consequently, only a combination of precautions taken by all belligerents will effectively ensure the protection of the civilian population and objects."

This is reflected in modern military operations. For example, a recent report on the armed conflict between Israel and the Palestinians in Gaza stated: "The Law of Armed Conflict not only prohibits targeting an enemy's civilians; it also requires parties to an armed conflict to distinguish their combatant forces from their *own* civilians, and not to base operations in or near civilian structures, especially protected sites such as schools, medical facilities and places of worship. … The reason for these rules is clear. When a party to an armed conflict uses civilian and protected spaces for military purposes, those spaces become legitimate targets for the opposing side, thereby placing civilian lives and infrastructure in grave danger." Israel Ministry of Foreign Affairs, *The Operations in Gaza: Factual and Legal Aspects*, 29 July 2009, available at: www.mfa.gov.il.

10 See David A. Bagley, "Ratification of Protocol I to the Geneva Conventions of 1949 by the United States: Discussion and Suggestions from the American Lawyer-Citizen", *Loyola of Los Angeles International and Comparative Law Journal*, Vol. 11, No. 3, 1989, pp. 448–449, where the author argues that "Articles 51 through 58 of the Protocol are among the most sweeping in their expansion of the protection afforded civilians and civilian objects. In general, they are broad positive law enactment of the 'principle of proportionality' in that they require that destruction of civilian objects be minimized."

11 See International Criminal Tribunal for the Former Yugoslavia (ICTY), *The Prosecutor v. Stanislav Galić*, Case No. IT-98-29-A, Judgment (Appeals Chamber), 30 November 2006, para. 194; and ICTY, *The Prosecutor v. Kupreskic et al.*, Case No. IT-95-16-T, Judgment (Trial Chamber), 14 January 2000, para. 524, where the ICTY found Articles 57 and 58 to be "part of customary international law, not only because they specify and flesh out general pre-existing norms, but also because they do not appear to be contested by any State, including those which have not ratified the Protocol".

12 US Department of Defense, *Law of War Manual*, Office of General Counsel, June 2015 (US Law of War Manual).

in good faith, would certainly provide much-needed protections to civilians in armed conflict.[13] However, the combination of increased urbanization and growing asymmetry of armed conflicts[14] is creating significant pressure on the doctrine of precautions in defence, stretching the "feasibility" standard beyond its capacity to adequately protect civilians. On the other hand, advancing technology, such as communication devices and sensors, provides a mechanism for defenders to more easily and more fully comply with their obligations to segregate or protect the civilian population.

For the customary obligation of "precautions against the effects of attacks" to maintain its effectiveness, particularly in urban areas of conflict, the understanding of feasibility and what is "practicable" in current urbanized armed conflicts will have to expand, increasing the practical responsibilities on the defender, including through the use of modern technology. Moreover, imposing criminal responsibility when appropriate and feasible precautions were not taken will add to the doctrine's enforceability and rectify the perceived imbalance between responsibilities of the attacker and the defender.

This article will first analyze the law, including its scope and application, documenting the historical development of the defender's obligation to segregate or protect civilian populations during armed conflict. It will then focus on the doctrine of "feasibility" in the context of this rule, including the meaning and application of the term. In particular, the article will argue that the doctrine of feasibility is both insufficiently defined and seldom fully administered enough to provide meaningful civilian protections, particularly given the increasing incidence of armed conflict in urbanized areas. Finally, the article concludes by proposing solutions to both the lack of perceived "feasible" precautions as they are currently understood and the lack of enforcement of violations of defensive precautions. Among the possible options that can be of tremendous assistance to the defender trying in good faith to meet its obligations are a variety of modern technologies.

Article 58

The obligations that have come to be known as "precautions against the effects of attacks" developed slowly, through decades of IHL formulation. Although it is now a well-accepted doctrine, its beginnings were humble.

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13 See J.-F. Queguiner, above note 9, p. 820, where the author states: "It is also worth noting that the standards laid down in Article 58 are not limited to prohibiting the deliberate scattering of military elements in a civilian environment in order to impede enemy operations. Article 58 has a much broader field of application: it requires the party under attack to adopt, in good faith, proactive measures that are designed to guarantee immunity of the civilian population and objects."

14 Michael John-Hopkins, "Regulating the Conduct of Urban Warfare: Lessons from Contemporary Asymmetric Armed Conflicts", *International Review of the Red Cross*, Vol. 92, No. 878, 2010, p. 470.

Historical development

As IHL developed, little emphasis was placed on the defender's responsibilities, particularly with respect to civilians.[15] In many ways, this is counter-intuitive because the defender is in the best position to know the location and situation of the civilian population at risk.[16] This much is demonstrated in one of the earliest acknowledgments of the defender's responsibilities found in the 1907 Hague Convention.[17]

Article 27 of Hague Convention IV, covering the laws of land warfare, starts with a general requirement for both attacker and defender:

> In sieges and bombardments all necessary steps must be taken to spare, as far as possible, buildings dedicated to religion, art, science, or charitable purposes, historic monuments, hospitals, and places where the sick and wounded are collected, provided they are not being used at the time for military purposes.[18]

Then, recognizing the greater level of control and knowledge possessed by the defender, Article 27 places additional duties specifically on the defender: "It is the duty of the besieged to indicate the presence of such buildings or places by distinctive and visible signs, which shall be notified to the enemy beforehand."[19]

While limited in its coverage, Article 27 represents quite a progressive approach to the defender's duties which has carried forward and is especially important with respect to modern urban warfare. The fact that the first codified provision of IHL dealing with duties of the defender required marking of buildings or places during a siege might seem a minimal obligation toward civilian protection, but it nevertheless is evidence of the principle of the defender's special obligations and has great applicability to current armed conflicts.

After the destruction of World War I, the International Law Association (ILA) noted the lack of emphasis on the defender's responsibilities to protect citizens from attacks. In 1938 the ILA proposed a draft convention[20] that would have "[set] up safety zones under the supervision of an independent controlling authority for the protection of a very limited section of the population".[21]

As argued by A. P. V. Rogers, one problem with the draft convention was that the ICRC and others were concerned it would be read to provide belligerents with "an excuse not to take any precautions for the protection of the civilian population outside such zones".[22] The draft convention was never adopted, and

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15 A. P. V. Rogers, *Law on the Battlefield*, Manchester University Press, Manchester, 1996, p. 71.

16 W. Hays Parks, "Air War and the Law of War", *Air Force Law Review*, Vol. 32, No. 1, 1990, p. 153.

17 Convention (IV) respecting the Laws and Customs of War on Land, 36 Stat. 2277, The Hague, 18 October 1907 (entered into force 26 January 1910).

18 *Ibid.*, Art. 27.

19 *Ibid.*

20 International Law Association, Draft Convention for the Protection of Civilian Populations Against New Engines of War, Amsterdam, 2 September 1938, available at: www.icrc.org/applic/ihl/ihl.nsf/Treaty.xsp?action=openDocument&documentId=29.DF95181E9CC0FDC12563CD002D6A9B.

21 A. P. V. Rogers, above note 15, p. 71.

22 *Ibid.*

Rogers concludes that prior to World War II, "[i]t was left to the good sense of the authorities of a place under attack to provide shelter for its citizens, and, with the advent of aerial bombardment, air raid warning systems and air raid shelters were usually provided".[23]

In the aftermath of World War II, the ICRC proposed rules for the consideration of States that were designed to limit the dangers to the civilian population based on the experiences of the war.[24] The draft rules covered a wide variety of topics, all designed to increase protections for civilians, including obligations on both attackers and defenders. Article 11 of the 1956 draft rules was titled "'Passive' Precautions" and stated:

> The Parties to the conflict shall, so far as possible, take all necessary steps to protect the civilian population subject to their authority from the dangers to which they would be exposed in an attack – in particular by removing them from the vicinity of military objectives and from threatened areas. However, the rights conferred upon the population in the event of transfer or evacuation under Article 49 of the Fourth Geneva Convention of 12 August 1949 are expressly reserved.
>
> Similarly, the Parties to the conflict shall, so far as possible, avoid the permanent presence of armed forces, military material, mobile military establishments or installations, in towns or other places with a large civilian population.[25]

The draft rules were never adopted. As Bothe, Partsch and Solf note, specifically with reference to the proposed obligation of defenders,

> [t]he reaction of experts at the Conferences of Government Experts lacked the enthusiasm with which the complementary obligation for precautions in attack was examined. It was pointed out that the interdependence of the civilian population with the infrastructure of a modern society makes full implementation of these goals impossible.[26]

The ICRC again raised the issue of defender's obligations in 1973 in an initial proposal for the Additional Protocol drafting convention. Very similar to the earlier attempt, the initial draft stated:

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23 *Ibid.*, p. 72. See also W. H. Parks, above note 16, p. 153, where the author states: "The practice of *all* nations that carried out aerial bombardment operations during World Wars I and II establishes clearly that *no* nation concerned itself with the risk of injury to the civilian population of an enemy nation incidental to the conduct of military operations." Parks goes on to argue that "Protocol I constitutes an improvement in the law of war in recognizing that an attacker should, in most cases, give consideration to minimization of collateral civilian casualties." *Ibid.*, pp. 153–154.

24 ICRC, Draft Rules for the Limitation of the Dangers incurred by the Civilian Population in Time of War, 15 October 1956, available at: www.icrc.org/ihl/INTRO/420?OpenDocument.

25 *Ibid.*

26 Michael Bothe, Karl Josef Partsch and Waldemar A. Solf, *New Rules for Victims of Armed Conflicts: Commentary on the Two 1977 Protocols Additional to the Geneva Conventions of 1949*, 2nd ed., Martinus Nijhoff, Leiden, 2013, pp. 413–414.

Article 51. Precautions against the effects of attacks

1. The Parties to the conflict shall, to the maximum extent feasible, take the necessary precautions to protect the civilian population, individual civilians and civilian objects under their authority against the dangers resulting from military operations.
2. They shall endeavour to remove them from the proximity of military objectives, subject to Article 49 of the Fourth Convention, or to avoid that any military objectives be kept within or near densely populated areas.[27]

This draft was the basis for what would eventually become Article 58 of AP I.[28]

The proposed text above generated little debate amongst the participating States. The minimal debate that did occur centred mostly on the issue of the meaning of the words "to the maximum extent feasible", which is addressed later in this article. Adopted by a vote of eighty to none, with eight abstentions,[29] the eventual text of the article states:

Article 58. Precautions against the effects of attacks

The Parties to the conflict shall, to the maximum extent feasible:

(a) without prejudice to Article 49 of the Fourth Convention, endeavor to remove the civilian population, individual civilians and civilian objects under their control from the vicinity of military objectives;
(b) avoid locating military objectives within or near densely populated areas;
(c) take the other necessary precautions to protect the civilian population, individual civilians and civilian objects under their control against the dangers resulting from military operations.[30]

Obligations

The final text of Article 58 lays out mandatory obligations that are limited by a significant caveat. The use of the term "shall" denotes the mandatory nature of the obligation, but, as will be discussed at length below, the caveat of "to the maximum extent feasible" has proven to significantly devalue the character of the obligation in modern conflicts. The increased incidence of conflict in urban and densely populated areas requires a re-examination of this obligation and its practical application.

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27 Official Records of the Diplomatic Conference on the Reaffirmation and Development of International Humanitarian Law Applicable in Armed Conflicts, Geneva (1974–1977), Swiss Federal Political Department, Bern, 1978 (Official Records), Vol. 1, Part. 1, p. 17.
28 AP I, Art. 58.l.
29 M. Bothe, K. J. Partsch and W. A. Solf, above note 26, p. 416.
30 AP I, Art. 58.

Complement to Article 57

It is clear that at its inception, Article 58 was designed to be read in conjunction with the corresponding protections for civilians found in Article 57.[31] As Bothe, Partsch and Solf have written:

> The obligation to take precautions to protect the civilian population and civilian objects against the collateral effects of attacks is a complementary one shared by both sides to an armed conflict in implementation of the principle of distinction. … Article 58 is the provision applicable to the party having control over the civilian population to do what is feasible to attain this goal. It is complementary to, and interdependent with, Art. 57 which implements, in somewhat more mandatory terms, the obligations of the attacking Party in this regard.[32]

31 Article 57 of AP I states:
1. In the conduct of military operations, constant care shall be taken to spare the civilian population, civilians and civilian objects.
2. With respect to attacks, the following precautions shall be taken:
    (a) those who plan or decide upon an attack shall:
         (i)   do everything feasible to verify that the objectives to be attacked are neither civilians nor civilian objects and are not subject to special protection but are military objectives within the meaning of paragraph 2 of Article 52 and that it is not prohibited by the provisions of this Protocol to attack them;
         (ii) take all feasible precautions in the choice of means and methods of attack with a view to avoiding, and in any event to minimizing, incidental loss of civilian life, injury to civilians and damage to civilian objects;
         (iii) refrain from deciding to launch any attack which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated;
    (b) an attack shall be cancelled or suspended if it becomes apparent that the objective is not a military one or is subject to special protection or that the attack may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated;
    (c) effective advance warning shall be given of attacks which may affect the civilian population, unless circumstances do not permit.
3. When a choice is possible between several military objectives for obtaining a similar military advantage, the objective to be selected shall be that the attack on which may be expected to cause the least danger to civilian lives and to civilian objects.
4. In the conduct of military operations at sea or in the air, each Party to the conflict shall, in conformity with its rights and duties under the rules of international law applicable in armed conflict, take all reasonable precautions to avoid losses of civilian lives and damage to civilian objects.
5. No provision of this Article may be construed as authorizing any attacks against the civilian population, civilians or civilian objects.
32 M. Bothe, K. J. Partsch and W. A. Solf, above note 26, p. 413. The Commentary echoes this same conviction: "This article is a corollary to the numerous articles contained in the Protocol for the benefit of the population of enemy countries. It is not concerned with laying down rules for the conduct to be observed in attacks on territory under the control of the adversary, but with measures which every Power must take in its own territory in favour of its nationals, or in territory under its control." Yves Sandoz, Christophe Swinarski and Bruno Zimmermann (eds), *Commentary on the Additional Protocols*, ICRC, Geneva, 1987, p. 692.

The Commentary makes it clear that this obligation exists despite any potential inconvenience to the defender and regardless of the actions of the attacker.[33] Kalshoven agrees and makes the point that this rule is really about "reduc[ing] the risks incurred by the civilian population as a result of military operations that will be carried out anyway".[34] In other words, Articles 57 and 58 are two sides of the same principle, the principle that civilians must be spared to the extent possible from the effects of armed conflict. Both the attacker and the defender have key roles to play in bringing about that humanitarian obligation.

W. Hays Parks confirms this perspective. Writing with respect to the requirement from both the Hague Conventions and Article 57(2)(c) of AP I, Parks argues:

> [T]he reason behind the requirement for warning stated in Hague Conventions IV and IX, and in article 57(2)(c) of Protocol I: it enables the Government controlling the civilian population to see to its evacuation from the vicinity of military objectives that might be subject to attack; it also permits individual civilians to remove themselves and their property from high-risk areas. There is little else that an attacker can do to avoid injury to individual civilians or the civilian population as such. Any attempt to increase an attacker's responsibility – particularly where a defender has failed or elected not to discharge his responsibility for the safety of the civilian population – will prove futile.[35]

Parks' inference is clear: the most effective way to ensure the safety of the civilian population is for the defender to shoulder a significant portion of the responsibility. In fact, Parks argues that "[i]f the new rules of Protocol I are to have any credibility, the predominant responsibility must remain with the defender, who has control over the civilian population".[36] This approach is also echoed in the new US Law of War Manual, which states: "The party controlling civilians and civilian objects has the primary responsibility for the protection of civilians and civilian objects. The party controlling the civilian population generally has the greater opportunity to minimize risk to civilians."[37]

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33 See *ibid.*, which states: "Belligerents may expect their adversaries to conduct themselves fully in accordance with their treaty obligations and to respect the civilian population, but they themselves must also cooperate by taking all possible precautions for the benefit of their own population as is in any case in their own interest."

34 Fritz Kalshoven, *Reflections on the Law of War: Collected Essays*, Martinus Nijhoff, Leiden, 2007, p. 223.

35 W. H. Parks, above note 16, p. 158.

36 *Ibid.*, pp. 153–154.

37 US Law of War Manual, above note 12, p. 186. Further, the United States takes the view that the presumption of civilian status laid out in Article 52(3) of AP I is not customary international law and actually has the negative consequence of "encourag[ing] a defender to ignore its obligations to separate military objectives from civilians and civilian objects". US Law of War Manual, above note 12, p. 197. The Manual then quotes a report from the 1991 Gulf War which states: "This language [of Article 52 (3) of AP I], which is not a codification of the customary practice of nations, causes several things to occur that are contrary to the traditional law of war. It shifts the burden for determining the precise use of an object from the party controlling that object (and therefore in possession of the facts as to its use) to the party lacking such control and facts, i.e., from defender to attacker. This imbalance ignores the realities of war in demanding a degree of certainty of an attacker that seldom exists in combat. It

Matthew Waxman also agrees and lays out several reasons for the argument that the defender plays a key role, if not *the* key role, in protecting the civilian population.

> First, the defending force often has substantial control (whereas the attacker has none) over where military forces and equipment are placed in relation to the civilian population. Second, the defending power often has better information than the attacker about where civilian persons and property actually are, and is therefore better positioned to avoid knowingly leaving them in harm's way. And, third, the defender's actions – including its proper efforts to protect itself by resisting attack – may contribute to the danger facing noncombatants. The defender's choice of strategy, too, will significantly determine the extent to which civilians are vulnerable to possible attack.[38]

Clearly, Articles 57 and 58 establish concurrent obligations that are held by both the attacker and the defender and are meant to complement each other as a means of providing increased protections to civilians. Article 58, then, is the statement of what those concurrent obligations are for the defender. Unfortunately, as will be demonstrated below, the equal levels of responsibility have not been equally reflected in liability over the past century. In fact, international criminal law has focused almost exclusively on the attacker, and almost completely ignored the legal responsibilities of the defender.

Key obligations: Segregate and protect

Acknowledging that the defender plays a key role in protecting the civilian population, States recognized Article 58 as the statement of those obligations. During the negotiations, States were careful to craft these obligations in a way that provided meaningful protections without unduly limiting the necessary actions of States, particularly those with dense populations in isolated urban areas.[39]

For example, the Commentary to Article 58 points out that "during the final debate several delegations indicated that in the view of their governments, this article should in no way affect the freedom of a State Party to the Protocol to organize its national defence to the best of its ability and in the most effective

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also encourages a defender to ignore its obligation to separate the civilian population, individual civilians and civilian objects from military objectives, as the Government of Iraq illustrated during the Persian Gulf War." US Department of Defense, *Conduct of the Persian Gulf War: Final Report to Congress Pursuant to Title V of the Persian Gulf Conflict Supplemental Authorization and Personnel Benefits Act of 1991 (Public Law 102–25)*, April 1992, p. 616.

38 M. C. Waxman, above note 3, p. 16; Michael N. Schmitt, "Military Necessity and Humanity in International Humanitarian Law: Preserving the Delicate Balance", *Virginia Journal of International Law*, Vol. 50, No. 4, 2010, p. 828.

39 Of course, as Geoffrey Corn points out, "[i]n this context, it would be improper to interpret the 'densely populated' qualifier as a license to co-mingle military assets with civilian populations when the civilian population is not 'dense'". Geoffrey S. Corn, "Targeting, Distinction, and the Long War: Guarding Against Conflation of Cause and Responsibility", *Israel Yearbook on Human Rights*, Vol. 46, 2016.

way".[40] Such concerns are especially relevant in an article entitled "Precautions", given that the use of such a word implies actions taken in advance of potential armed conflict, not just in reaction to it.[41]

These "proactive measures," as Queguiner refers to them, "are not limited to prohibiting the deliberate scattering of military elements in a civilian environment in order to impede enemy operations" but have a "much broader field of application".[42] For example, Rogers points out that the provisions for civil defence and for safety zones complement the provisions for protecting civilians against the effects of attacks.[43]

The final language of Article 58 appears to strike this balance between establishing the obligations of the defender to take precautions and maintaining the defender's ability to form an effective national security system. It does this by focusing on two main obligations. The first is to segregate military objectives from civilians (paragraphs (a) and (b)). This includes not placing military objectives near civilians and removing any civilians from areas where military objectives are located. The second obligation is to protect civilians and civilian objects under military control from the dangers inherent in military operations (paragraph (c)).

IHL has long recognized the benefits of distinguishing between targetable and non-targetable persons and objects. At its earliest codification, IHL required the defender to "display visible markings – usually flags – on certain buildings in order to make them easy to identify and thus protect them from enemy fire".[44]

The requirements in Article 58(a) and (b) are an attempt to continue this tradition. As Kalshoven and Zegveld have argued, segregating civilians and civilian

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40 Y. Sandoz, C. Swinarski and B. Zimmermann, above note 32, p. 692. Parks echoes this concern when he notes: "For hygiene, morale, communications and other reasons, military personnel and units historically have been billeted or housed in populated areas, and the doctrine of most nations provides for a continuation of this practice; it should not necessarily be viewed as sinister." W. H. Parks, above note 16, p. 159.

41 Eric Talbot Jensen, "Cyberwarfare and Precautions against the Effects of Attacks", *Texas Law Review*, Vol. 88, No. 7, 2010, pp. 1554–1555. This view of "precautions" is confirmed by the Commentary, which states that the article contains "measures to be taken already in peacetime, even though, strictly speaking, the article is only addressed to Parties to a conflict. Some of these measures have a preventive or precautionary character since they are concerned with preventing the construction of certain buildings in particular places, or removing objectives from an area where such buildings are located, or otherwise separating the population and their homes from dangerous places." Y. Sandoz, C. Swinarski and B. Zimmermann, above note 32, p. 692. See also ICRC, *International Humanitarian Law and the Challenges of Contemporary Armed Conflicts*, Report prepared for the 28th International Conference of the Red Cross and Red Crescent, 2–6 December 2003 (2003 Challenges Report), p. 14, available at: www.icrc.org/eng/assets/files/other/ihlcontemp_armedconflicts_final_ang.pdf, where the Conference identified the requirements of the defender to protect civilian populations as one of the areas that needed greater emphasis and noted: "States must be encouraged to take measures necessary to reduce or eliminate the danger to the civilian population already in peacetime."

42 J.-F. Queguiner, above note 9, p. 820.

43 A. P. V. Rogers, above note 15, pp. 79–83. Solf agrees and writes that States must take precautions "such as the provision of shelters and civilian defense programs, to protect the civilian population against the danger resulting from military operations". Waldemar A. Solf, "Protection of Civilians against the Effects of Hostilities under Customary International Law and Under Protocol I", *American University International Law Review*, Vol. 1, No. 1, 1986, p. 132.

44 J.-F. Queguiner, above note 9, p. 817.

objects from military objectives is the best source of protection possible.[45] The commingling of legitimate targets with civilians and civilian objects significantly increases the risk to civilians, both through mistakes and misinformation and through unintended but collateral civilian deaths.[46]

Article 58(a)'s requirement that belligerents remove the civilian population, individual civilians and civilian objects from the vicinity of military objectives is complemented by Article 58(b)'s requirement that belligerents also refrain from placing or moving targetable military objectives and forces into proximity with civilian populations.[47]

Although the rule is fairly easy to articulate, complying with it has proven to be more difficult. A number of issues quickly present themselves. For example, Queguiner notes that moving the civilian population may not always be the most humane alternative, such as during times of severe weather.[48] Bothe, Partsch and Solf recognize the special difficulty for segregation in urban areas and allow that "the attainment of this goal is difficult in a densely populated place or one in which war industry is closely integrated in with the civilian population".[49] Even the Commentary acknowledges that "the circumstances of war can change very rapidly",[50] making segregation a very difficult task, even for those committed to doing so. Finally, Rogers recognizes that avoiding locating military objectives in populated areas may simply not be feasible,[51] leaving the requirement of paragraph (c) to protect the civilian population as the only feasible option. These examples highlight the importance of segregation, but also the inherent difficulty, particularly in densely populated urban environments.

Additionally, Rogers notes the potential dilemma that by moving its military forces out of populated areas, a defender may "make them more readily identifiable by the enemy".[52] The Commentary notes this concern and responds:

> Moreover, a Party to the conflict cannot be expected to arrange its armed forces and installations in such a way as to make them conspicuous to the benefit of the adversary; several delegations raised this point during the discussion of the article. For example, one delegate, while accepting the article, explained his position as follows:
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> "With regard to the interpretation of the provision, with particular reference to sub-paragraph (b), it is the understanding of my delegation that this provision does not constitute a restriction on a State's military installations on its own territory. We consider that military facilities necessary for a

45 Frits Kalshoven and Liesbeth Zegveld, *Constraints on the Waging of War: An Introduction to International Humanitarian Law*, 4th ed., ICRC and Cambridge University Press, Cambridge, 2011, p. 117.
46 W. H. Parks, above note 16, p. 152.
47 J.-F. Queguiner, above note 9, p. 818; M. Bothe, K. J. Partsch and W. A. Solf, above note 26, p. 415.
48 J.-F. Queguiner, above note 9, p. 818.
49 M. Bothe, K. J. Partsch and W. A. Solf, above note 26, p. 415.
50 Y. Sandoz, C. Swinarski and B. Zimmermann, above note 32, pp. 693–694.
51 A. P. V. Rogers, above note 15, p. 73.
52 *Ibid.*, p. 75.

country's national defence should be decided on the basis of the actual needs and other considerations of that particular country. An attempt to regulate a country's requirements and the fulfilment of those requirements in this connexion would not conform to actualities."[53]

Despite the potential difficulties of applying this rule, many nations recognize the practical benefits of it and even non-party States such as the United States have included it in their doctrine.[54] Indeed, some countries have taken proactive measures to ensure compliance with this rule. Rogers reports that "[i]n Germany, for example, a whole range of emergency laws have been passed, some of them amending the Basic Law, covering business and finance, the supply of food and water, the building of shelters, and the movement and location of the civilian population".[55] Germany is not alone. The ICRC has documented significant State practice in support of this rule.[56]

Unfortunately, there also are a number of notorious examples of non-compliance. These include Iraq during the Gulf War of 1990–91,[57] Georgia and South Ossetia,[58] and Sri Lanka.[59] Human Rights Watch has noted a number of instances where the defender apparently failed to adequately segregate the civilian population and instead took actions that may have affirmatively violated the rule but that at minimum did not take advantage of available feasible alternatives, including "storing weapons and ammunition in populated areas and making no

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53   Y. Sandoz, C. Swinarski and B. Zimmermann, above note 32, p. 692, quoting Republic of Korea, O.R. VI, CDDH/SR.42, Annex, pp. 234–235,

54   See US Department of the Navy, Office of the Chief of Naval Operations and Headquarters, US Marine Corps, Department of Homeland Security and US Coast Guard, *The Commander's Handbook on the Law of Naval Operations*, NWP1-14M, MCWP 5-12.1, COMDTPUB P5800.7A, July 2007 ed., 2007, para. 8.3.2: "A party to an armed conflict has an affirmative duty to remove civilians under its control (as well as the wounded, sick, shipwrecked, and prisoners of war) from the vicinity of objects of likely enemy attack."

55   A. P. V. Rogers, above note 15, p. 74.

56   ICRC Customary Law Study, above note 7, Rules 23–24.

57   See A. P. V. Rogers, above note 15, pp. 77–78, where the author states: "During the Gulf War of 1990–91 it was alleged that Iraq pursued a deliberate policy of placing military objectives near protected objects, for example, near mosques, medical facilities and cultural property. Examples included dispersing military helicopters in residential areas, storing military supplies in mosques, schools and hospitals, including a cache of Silkworm missiles in a school in Kuwait City, placing fighter aircraft near the ancient temple of Ur and the discovery by UN inspectors of chemical weapon production equipment in a sugar factory in Iraq."

58   The Independent International Fact-Finding Mission on the Conflict in Georgia found that many South Ossetian fighters used civilian homes and buildings in the city of Tskhinvali to fire upon the Georgians, "putting at risk the lives of civilians who were sheltering in the basements of the same buildings" and thus committing a "clear violation of the obligation to avoid locating military objectives within or near densely populated areas". Independent International Fact-Finding Mission on the Conflict in Georgia, Report, Vol. 2, September 2009, p. 350.

59   Human Rights Watch documented numerous violations during the conflict between the Liberation Tigers of Tamil Eelam (LTTE) and Sri Lanka with respect to the responsibility to segregate forces from civilians, including allegations that the LTTE "prevented civilians under its effective control from fleeing to areas away from the fighting, [and] … forcing civilians to retreat with its forces". Similarly, the Sri Lankan Army (SLA) established safe zones for civilians and subsequently "subjected [those safe zones] to heavy shelling from SLA positions". Human Rights Watch, *War on the Displaced: Sri Lankan Army and LTTE Abuses against Civilians in the Vanni*, Report, February 2009, available at: www.hrw.org.

effort to remove the civilians under their control from the area";[60] "fir[ing] [rockets] directly from inhabited villages";[61] and "[taking] over civilian homes in the populated village, fir[ing] rockets close to homes, and driv[ing] through the village in at least one instance with weapons in their cars".[62]

Similar problems will continue to persist and may become even more pronounced with the development of new technologies such as cyber-capabilities.[63] As segregation becomes more difficult, the Article 58(c) obligation to protect will take on greater importance.

Article 58(c) has been described as a "'catch-all' provision that encompasses the requirements set forth in the other subparagraphs" of Article 58.[64] The article's "open-ended obligation to take 'other necessary precautions to protect the civilian population' … allows states to take additional precautionary measures according to circumstances such as the state's available means and other considerations relating to the conflict."[65]

Two terms in this subparagraph raise questions of interpretation: "military operations" and "danger". First, the use of the term "military operations" rather than "attacks" (as in the general rule) may well mean that subparagraph (c) applies to a broader range of activities.[66] For example, the Commentary argues that this language would include "all movements and acts related to hostilities that are undertaken by armed forces".[67] On the other hand, others argue that the scope of the application is no different, regardless of the different language used.[68]

Second, the precise meaning that should be ascribed to the word "danger" is unclear. According to Bothe, Partsch and Solf, "[t]he word 'danger' was questioned by some delegations but a decision was made by the Working Group to retain it because of the similar formulation concerning civilian hospitals as used in the fifth paragraph of Art. 18 of the Fourth Convention".[69] Although that

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60 Human Rights Watch, *Why They Died: Civilian Casualties during the 2006 War*, Report, Vol. 19, No. 5(E), September 2007, pp. 42–43, available at: www.hrw.org/sites/default/files/reports/lebanon0907.pdf.
61 *Ibid.*, pp. 46–47.
62 *Ibid.*, p. 55.
63 See Eric Talbot Jensen, "Cyber Attacks: Proportionality and Precautions in Attack", *International Law Studies*, Vol. 89, 2013, p. 213, where the author argues that "the ubiquitous nature of the cyber domain has made it almost impossible to segregate potential military objectives from civilian objects even in a geographic sense. Consider air traffic control centers and other major civilian transportation control centers as well as power generation facilities. All of these serve both civilian and military purposes and are clear cyber targets but are also virtually impossible to segregate. State practice in this area has at least demonstrated that nations have not found such segregation to be feasible. In fact, many militaries seem to be moving in the exact opposite direction and co-locating an ever greater percentage of their cyber infrastructure with civilian infrastructure."
64 Tallinn Manual, above note 8, p. 177.
65 J.-F. Queguiner, above note 9, p. 818.
66 See E. T. Jensen, above note 63, p. 212.
67 See Y. Sandoz, C. Swinarski and B. Zimmermann, above note 32, p. 600.
68 Tallinn Manual, above note 8, p. 177; Michael N. Schmitt, "Rewired Warfare: Rethinking the Law of Cyber Attack", *International Review of the Red Cross*, Vol. 96, No. 893, 2014, pp. 193–194.
69 M. Bothe, K. J. Partsch and W. A. Solf, above note 26, p. 416. The fifth paragraph of Article 18 of the Fourth Geneva Convention states: "In view of the dangers to which hospitals may be exposed by being close to military objectives, it is recommended that such hospitals be situated as far as possible from

may help in understanding the origin of the usage, it offers little help in understanding the details of its application.

Despite this potential confusion, the wording of the article strongly suggests that governments are not expected to protect all civilians and civilian objects in the conflict area from the effects of attacks. Rather, the obligation of subparagraph (c) applies only with regard to those under the government's control. While this was originally conceived of as a territorial limitation, Canadian representative B. G. Wolfe argued for changing the original proposal from "authority" to "control", highlighting the *de facto* nature of the obligation.[70] The change was accepted and the subparagraph amended. In a further clarification, Fleck argues that "[t]he duty to take precautions against the effects of military actions applies to a party to the conflict not only with regard to its own population but also with regard to other civilians temporarily under its control, e.g. aliens, refugees, and others".[71]

With regard to the actual protections, there is much agreement regarding what actions satisfy the subparagraph's requirements. As Queguiner notes:

> The most common precautions include the construction of shelters, the establishment of civil defence organizations and the installation of systems to alert and evacuate the civilian population. Other measures include programmes providing relief to the wounded, fire-fighting, decontamination, and identification and marking of high-risk areas.[72]

If these obligations become overly arduous or even impossible in some cases, the international community may have the responsibility to assist where needed. In a recent report to the United Nations (UN) Security Council, the UN Secretary-General argued that "[w]here a Government is prevented from protecting its civilians, for lack of either resources or de facto control over part of its territory, it may need to seek the support of the international system, which has been

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such objectives." Geneva Convention (IV) relative to the Protection of Civilian Persons in Time of War of 12 August 1949, 75 UNTS 973 (entered into force 21 October 1950), Art. 18, available at: www.icrc.org/ihl. nsf/FULL/380?OpenDocument.

70 See Official Records, above note 27, Vol. 14, pp. 198–199, where B. G. Wolfe is quoted as having argued that "use of the word 'control' would impose obligations on the parties which would not necessarily be implied by the use of the word 'authority.' It referred to the de facto as opposed to the de jure situation."

71 Dieter Fleck (ed.), *The Handbook of Humanitarian Law in Armed Conflicts*, Oxford University Press, Oxford, 1995, p. 223.

72 J.-F. Queguiner, above note 9, pp. 818–819. Rogers adds: "The last obligation covers a wide range of possibilities, from the provision of shelters, firefighting, provision of equipment to protect civilians from nuclear, chemical or biological attack, the enforcement of a blackout, an evacuation service, co-ordination of the emergency services and taking other adequate civil defence measures, a civil responsibility, to the broadcasting of warnings such as air raid warnings, a shared responsibility, and the fencing of minefields or the provision of military engineer support, a military responsibility." A. P. V. Rogers, above note 15, p. 76.

The Commentary also confirms many of the same options: "As regards persons, the other measures that can be taken by a Party to the conflict consist mainly of making available to the civilian population shelters which provide adequate protection against the effects of weapons. In some countries real efforts are made to supply the population with such shelters, both collectively and individually, the latter when every dwelling includes a shelter for the occupants." Y. Sandoz, C. Swinarski and B. Zimmermann, above note 32, pp. 694–695.

established for precisely this purpose".[73] Examples of potential international support for civilians might include establishing safe havens or non-conflict zones, arranging egress routes that have been agreed to by the warring parties, or providing transportation, such as by aircraft or ship, for civilians to leave contested areas. As the massacre at Srebrenica[74] during the Bosnian conflict illustrates, providing such international assistance is not without risks and should be accompanied by adequate resources and resolve to ensure its success.

Unfortunately, the situation with respect to Article 58 in its entirety is such that in 2003, the 28th International Conference of the Red Cross and Red Crescent identified the requirements of the defender to protect the civilian populations as one of the areas that needed greater emphasis.[75] The intervening years, with their corresponding increase in urban conflict, have only intensified this need. In other words, there is still much to do in ensuring that the defender understands and correctly applies its obligations with respect to precautions against the effects of attacks. This article will next explain why problems with effectively applying the principle of precautions against the effects of attacks might persist, and will propose some potential solutions to increase compliance and responsibility for non-compliance.

Feasibility

Article 58's obligations demonstrate the international community's clear attempt to significantly increase the protections for civilians and civilian objects. However, if strictly applied, they could also place unrealistic constraints on a nation's ability to defend itself effectively.[76] For this reason, the language "to the maximum extent feasible" was added to the article. As Kalshoven and Zegveld have argued:

> It is a truism that effective separation of civilians and civilian objects from combatants and military objectives provides the best possible protection of the civilian population. It is equally obvious that in practice, this may be very difficult, if not impossible, to realise. This much is certain, however, that parties must, "to the maximum extent feasible", endeavour to bring about and maintain the above separation.[77]

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73 Report of the Secretary-General to the Security Council on the Protection of Civilians in Armed Conflict, UN Doc. S/2001/331, 30 March 2001, para. 47.

74 Report of the Secretary-General pursuant to General Assembly Resolution 53/55: The Fall of Srebrenica, UN Doc. A/54/549, 15 November 1999, available at: www.securitycouncilreport.org/atf/cf/%7B65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7D/a_549_1999.pdf.

75 2003 Challenges Report, above note 41, p. 14.

76 See A.P.V. Rogers, above note 15, p. 76, where the author states that the language "to the maximum extent feasible" was "included on the insistence of the densely populated countries, which felt that Art. 58 would adversely affect their ability to defend themselves, and of countries worried about the expense of complying with the provision."

77 F. Kalshoven and L. Zegveld, above note 45, p. 117.

When Article 58 was originally drafted, the language "to the maximum extent feasible" modified only the first paragraph of the rule. Various proposals were made, including one by Romania to make the obligations absolute by deleting the qualifying phrase "to the maximum extent feasible".[78]

One of the delegates' great concerns was the ability of certain States to meet the requirements of Article 58 if the provisions were not limited somehow.[79] Bothe, Partsch, and Solf report that:

> During the deliberations within the Working Group, many representatives of both developing and developed countries strongly objected to the obligation to endeavour to avoid the presence of military objectives within densely populated areas. This was deemed by representatives of densely populated countries to restrict their right to self defence, and by others to impose too heavy an economic burden to disperse their industrial, communications and transportation facilities from existing locations in densely populated places.[80]

Specifically, the representatives of Switzerland, France and Italy noted the difficulty of applying Article 58 in States with dense populations or with certain topographies. The French Representative "wished to express his keen sense of anxiety about the provisions of subparagraph (b) since provisions of that kind could not, in practice, be applied in all regions of the world, having a high population density".[81] The Italian representative also expressed his concern, noting: "It is clear that a State with a densely populated territory could not allow [subparagraph (b)] to hamper the organization of its defence. The right of self defence … has overriding force. It is thus unthinkable that the intention of Article [58] should be to place that right in jeopardy."[82] And as Queguiner explains:

> [Switzerland's] mountainous topography means that the civilian population is heavily concentrated in valleys, which are areas of vital economic and military importance in which fighting would inevitably take place despite the density of civilian population and housing. For these reasons, the requirement of removing the civilian population from the vicinity of military objectives, and of refraining from placing such objectives within or in the vicinity of densely populated areas, has, on occasion, been described as difficult to achieve on a large scale."[83]

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78 M. Bothe, K. J. Partsch and W. A. Solf, above note 26, p. 414.
79 A. P. V. Rogers, above note 15, p. 76.
80 M. Bothe, K. J. Partsch and W. A. Solf, above note 26, p. 414.
81 CDDH/SR. 42, paras. 54, 55, quoted in M. Bothe, K. J. Partsch and W. A. Solf, above note 26, p. 416. "The expression 'to the maximum' extent feasible used in such provisions, if they were to be applied in the concrete case of France, could not really become operative, given the distribution and density of the population, unless it were accepted that French territory would not be defended …. That amounted to saying either that it was impossible to apply the provisions of subparagraph (b) or that such provisions, if they were actually applied, would prevent France from exercising its right to self defence, which was unacceptable." *Ibid.*, p. 416.
82 *Ibid.*, p. 416.
83 J.-F. Queguiner, above note 9, pp. 819–820.

Additionally, as Parks points out, even nations without dense populations or topographic difficulties may still find it extremely difficult, if not impossible, to strictly comply with this requirement for extended periods of time. Parks notes:

> Moreover, it is not always possible to remove the civilian population or individual civilians from the vicinity of a military objective for any extended period of time, particularly if there is a shortage of housing and/or the weather is severe. Nothing can be done to move immovable civilian objects in order to protect them from attack.[84]

In response to these types of concerns, the drafters turned to ensuring "that the duty to take these precautions is worded in relative terms".[85] B. G. Wolfe, the Canadian representative, proposed that the limiting language of "to the maximum extent feasible" be applied to the entire provision,[86] an amendment that was eventually accepted by consensus.[87] Article 58 thus rests on "the proposition that to avoid placing military objectives in populated places is a goal to be attained if feasible which must, however, give way to military requirements if necessary. For this reason, the term 'feasible' was used to modify all obligations."[88]

Applying the term "feasible" to all of the Article 58 obligations was clearly what the majority of States wanted during the negotiations, and it alleviated the concerns about States' ability to comply with the obligations. But there was no serious attempt to define the term as part of AP I, despite its frequent use.[89] As Rogers argued, understandings of the term will vary,[90] but it is safe to assume that "the requirements of Art. 58 of Protocol I are not absolute".[91]

John Redvers Freeland, head of the UK delegation during several of the sessions, stated that the words "to the maximum extent feasible" related to what was "workable or practicable, taking into account all the circumstances at a given moment, and especially those which had a bearing on the success of military operations".[92] Similarly, S. H. Bloembergen, representing the Netherlands, stated that "feasible" should be "interpreted as referring to that which was practicable or practically possible, taking into account all circumstances at the time".[93] At least eight other States joined with the UK and Netherlands on this interpretation with respect to the meaning of the term "feasible" in Article 58 as well as the numerous other articles which use that term.[94]

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84   W. H. Parks, above note 16, p. 159.
85   J.-F. Queguiner, above note 9, pp. 819–820; Julie Gaudreau, "The Reservations to the Protocols Additional to the Geneva Conventions for the Protection of War Victims", *International Review of the Red Cross*, Vol. 85, No. 849, 2003, pp. 143, 157.
86   Official Records, above note 27, Vol. 14, p. 199.
87   *Ibid.*, p. 304.
88   M. Bothe, K. J. Partsch and W. A. Solf, above note 26, p. 414; CDDH/215/Rev.1, para. 102.
89   For example, the term "feasible" is also used in Articles 41, 56, 57, 78 and 86.
90   A. P. V. Rogers, above note 15, p. 73; Michael N. Schmitt, "Asymmetrical Warfare and International Humanitarian Law", *Air Force Law Review*, Vol. 62, No. 1, 2008, p. 21.
91   A.P.V. Rogers, above note 15, p. 77.
92   Official Records, above note 27, Vol. 6, p. 214; E. T. Jensen, above note 41, p. 1548.
93   Official Records, above note 27, Vol. 6, p. 214.
94   J. Gaudreau, above note 85, pp. 156–157; M. Bothe, K. J. Partsch and W. A. Solf, above note 26, p. 415.

The use of the language "taking into account all circumstances at the time" takes account of the fact that a State's or commander's decisions are limited by their circumstances and knowledge at the time, and therefore should not be subject to subsequently informed analysis. This expression stems from the World War II prosecution of the German general Lothar Rendulic.[95] General Rendulic anticipated a swiftly advancing Russian force and conducted a scorched earth policy in Finnmark to inhibit troop movement. In adjudicating Rendulic's responsibility for wanton destruction of property without military necessity, the Court determined that the legal standard was "consideration to all factors and existing possibilities" as they "appeared to the defendant at the time".[96] This same standard is understood to apply to the feasibility of precautions in defence.

The US Law of War Manual lists five examples of "circumstances" which may impact the feasibility of a precaution. They are:

- The effect of taking the precaution on mission accomplishment;
- Whether taking the precaution poses risk to one's own forces or presents other security risks;
- The likelihood and degree of humanitarian benefit from taking the precaution;
- The cost of taking the precaution, in terms of time, resources, or money; or
- Whether taking the precaution forecloses alternative courses of action.[97]

While these considerations are certainly not meant to be exhaustive, they offer one State's understanding of how to practically apply the principle of "feasibility".

The widespread similar interpretation of the term "feasible" prompted the ICRC to "caution that the expression should not be too broadly interpreted, for fear that invoking only the success of military operations would lead to the humanitarian duties set out in the various rules being ignored".[98] The ICRC's own Commentary, however, acknowledges the intent of the States Parties not to make this an absolute requirement, but rather to allow flexibility in the application of the rule.[99] This interpretation continues today.[100]

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95 See United States Military Tribunal, Nuremberg, *United States v. Wilhelm List et al.*, Case No. 47, Judgment (Military Tribunal V), 19 February 1948, in *Trials Of War Criminals Before The Nuremberg Military Tribunals Under Control Council Law No. 10*, Vol. 11, 1950, p. 1295; See also Eric Talbot Jensen, "Unexpected Consequences from Knock-On Effects: A Different Standard for Computer Network Operations?", *American University International Law Review*, Vol. 18, No. 5, 2003, pp. 1181–1183.

96 *United States v. Wilhelm List et al.*, above note 96, p. 1296.

97 US Law of War Manual, above note 12, p. 190.

98 See Y. Sandoz, C. Swinarski and B. Zimmerman, above note 32, pp. 681–682; J. Gaudreau, above note 85, pp. 143, 157.

99 See Y. Sandoz, C. Swinarski and B. Zimmerman, above note 32, pp. 681–682; J. Gaudreau, above note 85, p. 692, which states: "In fact the Diplomatic Conference often used this expression to illustrate the fact that no one can be required to do the impossible. In this case it is clear that precautions should not go beyond the point where the life of the population would become difficult or even impossible."

100 See US Law of War Manual, above note 12, p. 189, which states: "Although this manual primarily uses 'feasible,' other adjectives have been used to describe the obligations to take feasible precautions during armed conflict. The words 'practicable,' 'reasonable,' 'due,' and 'necessary' have been used to describe this obligation"; and letter from Ambassador Christopher Hulse to the Swiss government, 28 January 1998, available at: www.icrc.org/ihl.nsf/NORM/0A9E03F0F2EE757CC1256402003FB6D2?

Fixing feasibility

As the above discussion highlights, "precautions against the effects of attacks" acts in concert with "precautions in attack" to provide maximum protections to the civilian population. However, despite the accepted fact that the defender has much more control over the civilian population and a much easier task in segregating and protecting them from the dangers of armed conflict than the attacker, the vast majority of scholarship, reporting and litigation focuses on the attacking party's role in protecting civilians.

Criminal responsibility

Some of the imbalance of focus is attributable to the lack of enforcement for violations of the defender's responsibilities. In fact, while an attacker can commit a grave breach in at least five different ways under AP I, no similar provisions draw attention to the responsibility of the defender.[101] In response to this lack of textual accountability, at least one prominent scholar asserts that "[a] violation of Article 58 will not" entail individual criminal liability.[102] While this assertion may be overbroad, the general lack of criminal responsibility may reflect the intent of the States who determined that "feasibility" was a necessary limitation on the responsibilities of the defender. Nevertheless, in today's conflicts amongst a growing urbanized population, the lack of criminal responsibility may now be having the unintended consequence of excusing actions that would never have been acceptable to the States who argued for the feasibility limitation.

Some attempts have been made to increase awareness of the defender's role in armed conflict with respect to individual criminal responsibility. In a recent report by a UN Fact-Finding Commission, the Commission recognized that affirmatively taking actions which put civilians at risk by failing to segregate or protect them from the effects of military operations is a violation of the rule on precautions in defence. The Commission concluded that "launching attacks … close to civilian or protected buildings constitutes a failure to take all feasible

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OpenDocument, listing the United Kingdom's reservations and declarations to AP I, and explaining in paragraph (b) that "[t]he United Kingdom understands the term 'feasible' as used in the Protocol to mean that which is practicable or practically possible, taking into account all circumstances ruling at the time, including humanitarian and military considerations". See also UK Ministry of Defence, *Manual of the Law of Armed Conflict*, JSP 383, 2004, p. 81, para. 5.32; ICRC Customary Law Study, above note 7, p. 54.

101 AP I, Art. 85.

102 J.-F. Queguiner, above note 9, p. 816. See also Rewi Lyall, "Voluntary Human Shields, Direct Participation in Hostilities and the International Humanitarian Law Obligations of States", *Melbourne Journal of International Law*, Vol. 9, No. 2, 2008, p. 316, where the author states: "By contrast, liability does not attach to a breach of art. 58 amounting to a failure by a defending state to fulfil its responsibility to take adequate precautions to remove and protect civilians from attack"; and W. H. Parks, above note 16, p. 158, where the author states: "In practical terms, article 58 can do little more than admonish. … The provisions contained in article 58 are not obligatory." Note that the Rome Statute has no provision for a violation of precautions against the effects of attacks. The closest possible violation would be the prohibition on human shields found in Rome Statute of the International Criminal Court, UN Doc. A/CONF.183/9, 17 July 1998 (entered into force 1 July 2002), Art. 8(b)(xxxiii).

precautions … [and] would have constituted a violation of the customary rules of international humanitarian law" because it would have put the civilians at risk from an assumed military response.[103] In other words, the report found that if a defender launches an attack from an area close to civilians, he is putting those civilians at risk from counter-attacks by the attacker. This is a violation of the customary rule and would presumably result in individual criminal responsibility.

The report further concluded that a territorial State is also responsible for preventing armed groups "from endangering the civilian population by conducting hostilities in a manner incompatible with international humanitarian law",[104] which would presumably include putting civilians at risk based on the method of defence. Queguiner had made a similar point years earlier when he argued that "a defending party who fails to meet its precautionary obligations will bear at least some legal responsibility for the loss or damage caused by an attack on a legitimate military objective, even when the attacking party has taken certain precautionary measures".[105]

A situation like that highlighted at the beginning of this article, where a defender chooses to co-locate military objectives with civilians and civilian objects once an armed conflict has started, serves as an adequate illustration of why increased criminal responsibility would significantly impact the protection of civilians in armed conflict. It seems unlikely that the post-onset-of-hostilities commingling by Daesh of its military headquarters with a known jail is the type of activity States were anxious to protect when insisting on the principle of feasibility to cover the defender's obligation. Their concern, as reflected in the discussion above, was to preserve a State's ability to develop its military infrastructure based on its topography and workforce. There is no evidence that such a placement would facilitate Daesh's ability to deal with difficult topography or dense populations.[106] Rather, as many modern scholars have argued,[107] this and similar actions by defenders in recent armed conflicts seem more like attempts to use the law as a shield[108] and to potentially immunize otherwise

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103 Report of the United Nations Fact-Finding Mission on the Gaza Conflict, Human Rights Council, UN Doc. A/HRC/1 2/48, 25 September 2009, para. 496, available at: www2.ohchr.org/english/bodies/hrcouncil/docs/12session/A-HRC-12-48.pdf.

104 *Ibid.*, para. 498.

105 J.-F. Queguiner, above note 9, p. 821.

106 See the discussion above.

107 J.-F. Queguiner, above note 9, pp. 811–817; Robin Geiss, "When Locating Military Objectives Within Populated Areas Becomes Using Human Shields", in Edoardo Greppi (ed.), *Proceedings of the 37th Round Table on Current Issues in International Humanitarian Law: Conduct of Hostilities: The Practice, the Law and the Future*, 2014.

108 This type of activity has been termed "lawfare". See Col. Charles J. Dunlap Jr., "Law and Military Interventions: Preserving Humanitarian Values in 21st Century Conflicts", presentation prepared for the Humanitarian Challenges in Military Intervention Conference, Washington, DC, 29 November 2001, available at: www.ksg.harvard.edu/cchrp/Web%20Working%20Papers/Use%20of%20Force/Dunlap2001.pdf; Michael N. Schmitt, "The Impact of High and Low-Tech Warfare on the Principle of Distinction", Harvard Program on Humanitarian Policy and Conflict Research, Briefing Paper, November 2003, reprinted in Roberta Arnold and Pierre-Antoine Hildbrand (eds), *International Humanitarian Law and the 21st Century's Conflicts: Changes and Challenges*, Editions Interuniversitaires Suisses, Lausanne, 2005.

legitimate targets through the presence of civilians.[109] Whether or not Daesh's actions might be prosecuted as a war crime for the use of human shields, they should be prosecutable as a violation of Article 58.

Professor Geoff Corn has pointed out the difficulties of proving the "intentional" nature of a violation of precautions in defence[110] and has proposed a comparative assessment approach whereby individual criminal liability would be based on the factual circumstances, such as an analysis of what other structures might have been used by Daesh for its headquarters.[111]

Corn's conclusion is undoubtedly correct, particularly with respect to accounting for the factual situation. Nevertheless, the current complete lack of individual criminal responsibility based on "feasibility" as a justification for not taking important steps to protect civilians in a defender's control should not continue. Rather, when the defending forces intentionally commingle military headquarters or other installations with civilians and civilian objects, or by their own actions intentionally put civilians at increased risk of attack and fail to warn or take other protective actions, particularly after the onset of hostilities, the international community ought to find a violation of the defending force's obligations and prosecute responsible individuals for a war crime.[112]

While this would certainly be an evolution of the law from its current application, existing and emerging technology provides the defender with a multitude of options that directly expand the "feasibility" of precautions in defence and enable the defender to more aggressively fulfil its obligations. Failure to utilize these emerging technologies, when accessible, should lead to criminal responsibility.

Technology

Emerging technologies and their potential impact on the conduct of hostilities have been the subject of extensive scholarship recently,[113] but little attention has been

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109 AP I, Art. 51(7); Nils Melzer, *Interpretive Guidance on the Notion of Direct Participation in Hostilities Under International Humanitarian Law*, ICRC, Geneva, 2009, pp. 56–57, available at: www.icrc.org/eng/assets/files/other/icrc-002-0990.pdf.
110 See G. S. Corn, above note 39.
111 *Ibid.*
112 It might be argued that the wording of Article 58 of "The Parties to the conflict" applies only to States and would not bind non-State actors. This interpretation is refuted by the ICRC in a March 2008 Opinion Paper which states, "non-governmental groups involved in the conflict must be considered as 'parties to the conflict'". ICRC, "How is the Term 'Armed Conflict' Defined in International Humanitarian Law?", Opinion Paper, March 2008, available at: www.icrc.org/eng/assets/files/other/opinion-paper-armed-conflict.pdf. This view is also reflected in the 2016 Commentary to Article 3 which clearly makes the distinction between States and Parties to a conflict. ICRC, *Commentary on the First Geneva Convention: Convention (I) for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field*, 2nd ed., 2016, paras 384–392, available at: https://ihl-databases.icrc.org/ihl/full/GCI-commentary.
113 For example, a 2012 issue of the *International Review of the Red Cross* was dedicated to "New Technologies and Warfare": *International Review of the Red Cross*, Vol. 94, No. 886, 2012, available at: www.icrc.org/en/international-review/new-technologies-and-warfare. See also William H. Boothby, "The Legal Challenges of New Technologies: An Overview", in Hitoshi Nasu and Robert McLaughlin (eds), *New Technologies*

given to how such technologies can increase the defender's ability, and arguably responsibility, to protect the civilian population under its control. Advancing technology can have a significant impact on the understanding of relative terms such as "feasible". Boothby makes this argument with respect to Article 58 when he writes:

> In considering the legal implications of futuristic new technologies, it is important to bear in mind that the law of targeting, for example, is replete with relative language … and so is the "maximum extent feasible" in Article 58 of Additional Protocol I. Those relative notions seem likely to be capable of adaptive interpretation as technological development improves.[114]

There are several current and emerging technologies that are very capable of assisting a committed defender. For example, Corn's comparative assessment approach to individual criminal liability already takes account of the application of emerging technologies.[115] The use of these technologies will not only allow the defender greater situational awareness as to where the civilians are, but will also increase the defender's ability to both segregate military forces from civilians and protect those who cannot be segregated. For the purposes of further analysis, these technologies will be roughly divided into the categories of sensors, communication devices and markers.

Sensors

The use of sensors is one of the areas where emerging technology's impact on the defender is most obvious. Sensor technology is currently being looked at for a number of innovative military uses, including the Squad X Core Technologies Program, which is designed to "give troops unprecedented situational awareness, the ability to sense threats more than half a mile away and to understand the location of all of their team even in environments with degraded communications and GPS".[116]

As nanotechnology[117] develops, it will allow the creation of sensors that can detect not only people but also "a wide range of gases and volatile organic compounds".[118] Sensors will be both stationary and mobile and will be able to

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and the Law of Armed Conflict, Asser Press, The Hague, 2014, p. 22, where the author argues that it is "a matter of some difficulty to determine whether it is technology that challenges the law or the law that challenges the use of novel technologies in armed conflict".

114 *Ibid.*, p. 25.

115 See G. S. Corn, above note 39.

116 See Patrick Tucker, "Military Looking to Give Troops Super Sensing Abilities", *Defense One*, 10 February 2015, available at: www.defenseone.com/technology/2015/02/military-looking-give-troops-super-sensing-abilities/105039/, where the author writes: "By digitization, [the Defense Advanced Research Projects Agency] means collecting sensor data that would provide much more detailed and actionable real-time information about a squad's condition, surroundings and adversaries."

117 See National Nanotechnology Initiative, "Frequently Asked Questions", available at: http://nano.gov/nanotech-101/nanotechnology-facts; Eric Talbot Jensen, "The Future of the Law of Armed Conflict: Ostriches, Butterflies, and Nanobots", *Michigan Journal of International Law*, Vol. 35, No. 2, 2014, p. 301.

118 Lockheed Martin, "High-Performance Nanoenabled Electronics: Robust, Versatile, Affordable, Fast", Lockheed Martin Corporation, Bethesda, MD, 2013, available at: www.lockheedmartin.com/content/dam/lockheed/data/corporate/documents/nano/sensors.pdf.

provide immense amounts of information by sensing motion, sound, heat and many other pieces of information a defender might need to know to meet its "Precautions" obligations. These sensors are perfect for providing constant information from places where militaries can't permanently position people and will allow the collection of data not only on the location of the civilian population, but also on potential dangers from ongoing hostilities. And helpfully, the sensors are being built to last significantly longer than is currently possible.[119]

As discussed earlier, the defender already has much better information on the position and security of civilians in the zone of armed conflict. That situational awareness could be magnified by the effective use of sensors. Sensors could be used by the defender to track the location and movement of the civilian population, which would then allow the defender to take appropriate actions to either segregate or protect those civilians. For example, placing sensors at heavily trafficked areas would provide extremely useful data for the defender to use to determine how best to segregate and protect the civilians in the area. Additionally, sensors could be used by a defender to anticipate enemy force movement into the area and then, using some of the technologies discussed below, provide early warning so civilians can leave the area or take appropriate shelter.

Sensors come in many varieties, many of which are fairly user-friendly and inexpensive potential uses of current technologies that will allow the defender to more easily and effectively apply his obligations against the effects of attacks. As technology advances and becomes ever more available to defenders, the international community's understanding of what precautions are "feasible" for a defender should also increase. As defenders increasingly have access to sensors that can provide important information and data which would better allow segregation and protection, defenders ought not only to be expected to use it, but also to bear some of the responsibility for adverse effects if they fail to appropriately do so.

Communications devices

Innovation in communications devices is another area where defenders can take real, positive and "feasible" steps forward. The use of phone calls has already been documented in urban areas to help prevent civilian casualties in attack.[120] Defenders should also embrace this technology. The pervasiveness of mobile

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119 Patrick Tucker, "Pentagon Seeks Sensors that Last for Years", *Defense One*, 13 April 2015, available at: www.defenseone.com/technology/2015/04/pentagon-seeks-sensors-last-years/110044/.

120 Steven Erlanger and Fares Akram, "Israel Warns Gaza Targets by Phone and Leaflet", *The New York Times*, 8 July 2014, available at: http://www.nytimes.com/2014/07/09/world/middleeast/by-phone-and-leaflet-israeli-attackers-warn-gazans.html, where the authors state: "But the events on Tuesday were another example of a contentious Israeli policy in which occupants of a building about to be bombed or shelled are given a brief warning in Arabic to evacuate. The Israelis have used such telephone calls and leaflets for years now, in a stated effort to reduce civilian casualties and avoid charges of indiscriminate killings or even of crimes against the rules of war."

phones and local tracking and geolocation capabilities[121] provides the defender with very feasible and effective methods of exercising precaution. For example, when a defender launches an attack from within an urban area, cell phone numbers of civilians living in the area could be found and calls could be made to warn nearby civilians of potential counterfire and warn them to leave the area. The same could be done when incoming attacks from the enemy are projected or even on their way.

Additionally, stationary audio sirens or signals could be used, much like the air raid warnings of World War II. These audio signals could be attached or temporarily delivered to areas in danger and programmed to send multiple messages, including to take shelter in preparation for an incoming attack, or to leave in front of an incoming foe, or even to leave in anticipation of a counterattack to an ongoing attack. Recognizing the fluid nature of a battle, these signals could also be mobile, attached to drones or other devices.

The use of webcams[122] could also provide the defender with timely and accurate information that would help it to meet its precautionary responsibilities. Much like the sensors discussed above, placing webcams in key spots to monitor civilian traffic, including movement in response to the audio signals mentioned above, would be particularly useful in urban areas to help track the civilian population. Webcams could also be placed at the entrance of key buildings such as hospitals or displaced civilians centres, and their footage then broadcast on the web for the attacker (and potentially the international community) to monitor, ensuring that the attacker could make no mistake as to who was actually in the building and the legitimacy of the building's protections under IHL. Using webcam technology in this way should help protect civilians by providing greater situational awareness to both the defender and the attacker.

And of course, drones could make all of these capabilities mobile in a very inexpensive way. Drones are comparatively inexpensive and getting cheaper and more ubiquitous. They provide instantaneous situational awareness to a defender who is intent on effectively segregating and/or protecting the civilian population in an urban setting.

Again, these easy-to-use and already available technologies should have a significant impact on a defender's ability to meet its precautionary responsibilities – and advances in technology will only increase this ability. As nanotechnology makes communication devices smaller, faster and more durable, the understanding and expectation of the "feasible" actions that the defender can take should also dramatically increase. This should then be reflected in a

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121 ISACA, *Geolocation: Risk, Issues and Strategies*, White Paper, Rolling Meadows, IL, 2011, available at: www.isaca.org/groups/professional-english/wireless/groupdocuments/geolocation_wp.pdf.
122 For example, the New York City Police Department uses an extensive camera system to provide real-time surveillance of the city. Similar cameras could be installed in key locations by the defender in order to monitor population movements and provide greater protections. See Bob Hennelly, "A Look Inside the NYPD Surveillance System", *WNYC News*, 21 May 2010, available at: www.wnyc.org/story/71535-a-look-inside-the-nypd-surveillance-system/.

defender's criminal responsibility when the defender fails to take advantage of these accessible and beneficial options.

Marking

Finally, the use of markings will also be considerably facilitated by emerging technology. In addition to the audio signals mentioned above, visual and olfactory signals and markers should also begin to play a key role for the defender. When a defender plans to conduct an attack from an urban area, where he anticipates that he will get a counterattack in response, the use of both visual and olfactory markers could help to disperse civilians from the area. For example, a drone could deliver an explosive that was extremely loud and bright, but non-lethal, and which would encourage the civilians to depart the area before the anticipated counterfire attack had begun. Similarly, naturally occurring odours may be used to signal a dangerous area and encourage civilians to disperse. Other visual signals, such as flashing lights or brightly coloured spray paint of some pre-designated colour, could be used (possibly delivered by a drone) to warn civilians in the area.

Additionally, such markings could be used to denote protected areas,[123] particularly in a fluid battlefield. If displaced civilians were being gathered in an *ad hoc* building, drone-delivered markings could be used to notify an attacker of the protected nature of the building, even in a temporary way. Such actions certainly provide the defender with the opportunity to abuse the protections and deceive the attacker, but combined with some of the technologies discussed earlier, they could also provide very clear and confirmable indications of current protected status.

As with the other mentioned emerging technologies, these are readily available, even for non-State actors, and their accessibility and effectiveness will only increase with advances in technology. Defenders should recognize the value of these technologies and take affirmative steps to employ them in armed conflict. Similarly, the international community should acknowledge these capabilities and raise the expectation of what a defender can "feasibly" do with respect to precautionary measures, and then enforce those measures through criminal responsibility.

Conclusion: Feasibility reconsidered

While "feasibility" is absolutely an important standard that must be maintained in assessing the culpability of the defender, it is also an evolving standard that must

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123 See US Law of War Manual, above note 12, pp. 251–252, which states: "It may be appropriate to identify protected persons and objects, as such, through the use of distinctive and visible signs. For example, it may be appropriate to identify civilian hospitals or civilian air raid shelters in order to facilitate their protection during enemy bombardment. Signs indicating civilian objects, as such, should be notified to the opposing party so that the opposing party knows to refrain from bombarding places or buildings bearing these signs."

take account of developing technology. As increased capability to segregate and/or protect the civilian population develops, the obligation to provide that segregation and protection must concurrently expand. If the law is to continue to provide meaningful protection to civilian populations, particularly in conflicts in urban areas, defenders have to recognize and accept this evolution and adapt their tactics and procedures.

The suggestions and examples above are just illustrations of the kinds of technologies that are in development or already in use which provide important opportunities for defenders in applying their IHL obligations. The important point is that as these technologies continue to develop and become available to defenders, the understanding of the "feasibility" test needs to evolve accordingly. As access to advanced technology that could assist the defender in applying precautions becomes more pervasive, the expectation that defenders will make use of such technology should increase. In Air Commodore Boothby's words, there should be some "adaptive interpretation" as to what the standard of feasibility really means.[124]

In particular, with the technologies now available through various communications devices, a defender who fires from urban areas must take proactive responsibility to segregate the population from that firing point, knowing that counterfire attacks are likely to follow. It is no longer feasible for a defender to argue that the fluid nature of the battlefield is such that warnings cannot be provided and direction given to local civilians in order to segregate them from the military equipment used in the attack or to protect them from the effects of the anticipated counterattack.

Similarly, with technological advances, it is no longer acceptable for a defender to argue that it does not at least share responsibility for civilian deaths or damage caused by attackers when the defender knowingly establishes military firing points or stores military equipment near civilian populations. As an example, if a defender fails to discover the movement of civilians in a particular area prior to establishing a firing position near a school or other site where civilians are seeking shelter, or does not take sufficient precautions such as phone calls or the use of sirens or other advanced markings to warn the civilians and give them an opportunity to move, the defender must bear criminal responsibility for corresponding death to civilians or damage to civilian objects that comes from enemy counterfire.[125]

This is also true with mobile military equipment. As defenders manoeuvre military equipment in response to developments in the battle, they must embrace the obligation to notify the civilian population of areas that are likely to be attacked due to the military presence. Phone calls and auditory signals are two ways in which this can easily be accomplished, and the international community should expect as much.

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124 W. H. Boothby, above note 113, p. 25.
125 See G. S. Corn, above note 39.

Despite the inherent difficulty of protecting civilian populations in urban areas, Article 58 remains an important and achievable standard. While appropriately limited to those measures which are "feasible", precautions in defence must be more than just recommendations to be either accepted or refused with no corresponding responsibility. Just as those obligations were meant to be limited to those things which were practicable when States embraced the obligation, those measures which are feasible should carry with them an expectation that they be applied in order to better protect the civilian population. Emerging technologies provide important capabilities which defenders should utilize in an effort to meet the obligations of precautions against the effects of attacks.

Sensors, communications devices and markers are examples of existing and developing technologies that can be applied now by defenders in current armed conflicts that will have a significant benefit to the local civilian population. As the international community recognizes these capabilities, it should also begin to hold defenders at least partially accountable for civilian deaths and damage that occur from attacks where defenders did not take advantage of these options. Encouraging and conducting prosecution of defenders who fail to take these kinds of steps to fulfil their "Precautions" obligations will send a vital message to defenders in the age of urban warfare – individual criminal responsibility for protection of civilians in modern armed conflicts is shared by both the attacker and the defender, and both must take "feasible" precautions or accept the consequences. By embracing a defender's criminal liability, the law will achieve greater clarity and the protections afforded to the civilian population will steadily increase.

Protecting civilians in urban areas: A military perspective on the application of international humanitarian law

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Abstract

Implementing the principles of international humanitarian law (IHL) represents a real challenge if the protection of civilians in today's urban armed conflicts remains a priority for armed forces. The application of the principle of distinction comes up against the difficulties of obtaining intelligence, in particular in the absence of troops on the ground. The minimalization of collateral damage requires putting in place very precise targeting procedures, and even the adoption of tactics designed to draw out traditional combat from cities. In terms of precautionary measures in attack or against the effects of an attack, these must be adapted to the context of urban combat. Nevertheless, IHL remains an essential instrument that must be analyzed and translated into action in a practical manner in order to conduct military operations that are at the same time effective and legally permissible.

Keywords: international humanitarian law, protection of civilians, cities, urban areas, targeting, distinction, proportionality, collateral damage, precaution, French armed forces, intelligence, troops on the ground.

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Introduction

It would be unrealistic and naive to imagine a "clean" war[1] with no civilian casualties. Just the opposite is commonly observed in the types of conflict prevalent today, often non-international in nature, involving organized armed groups disinclined to respect the customs of war and taking place, in some cases, in the territory of a failed State. It is in these types of situation that civilians suffer the most as a result of the fighting and are sometimes even deliberately targeted, particularly in urban environments, as is the case now in Syria, Gaza, Yemen and eastern Ukraine.

In this context, it is tempting to point to the inadequacy of the rules of international humanitarian law (IHL), which do not *a priori* take into account the new types of "combatants" and their asymmetric forms of warfare or consider the consequences of the use of new technologies. In my view, however, two preliminary observations need to be made before making such a judgement. First, IHL is a rich body of law, open to interpretation, and we would do well to explore all its possibilities before disparaging it. Second, it should not be forgotten that the failure of a party to a conflict to respect IHL does not release the other from its obligations in this respect, and this tends to reinforce a virtuous circle of practical IHL implementation.

As a legal practitioner for the French armed forces, I would like to share some reflections on the practical difficulties of implementing the principles of IHL (especially distinction, proportionality and precaution) in today's conflicts, particularly in urban areas, and the solutions that would allow the parties to act according to these principles and in keeping with the spirit of IHL.

Difficulty of applying the principle of distinction in urban areas

The very nature of cities makes it complicated for armed forces to apply the principle of distinction in respect of objects.[2] Cities are, by definition, made up of countless civilian objects (dwellings, shops, schools, hospitals, etc.). Objects that are, by nature, military objectives (barracks, air bases, headquarters, etc.) are sometimes interwoven in the fabric of the city, whether as a result of urban extension or by design. In non-international armed conflicts (NIACs) in which

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1   In the wake of the shock of defeat in Vietnam, the idea of "clean" or "zero-casualty" warfare spread and gained wide currency in the first Gulf War. See François-Bernard Huyghe, "The Impurity of War", *International Review of the Red Cross*, Vol. 91, No. 873, 2009. See also Guylain Chevrier, "Guerre du Golfe et télévision: Un mariage stratégique", *Cahiers d'Histoire: Revue d'Histoire Critique*, No. 86, 2002.

2   Protocol Additional (I) to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts, 1125 UNTS 3, 8 June 1977 (entered into force 7 December 1978) (AP I), Article 52(2): "Attacks shall be limited strictly to military objectives. In so far as objects are concerned, military objectives are limited to those objects which by their nature, location, purpose or use make an effective contribution to military action and whose total or partial destruction, capture or neutralization, in the circumstances ruling at the time, offers a definite military advantage."

regular State armed forces fight organized armed groups (OAGs), the military infrastructures of the latter tend to be very difficult to identify, because they are often pragmatically located in originally civilian buildings. The first difficulty for armed forces deployed in a conflict in which the adversary is operating in a city is therefore to pinpoint, based on various forms of intelligence, the exact location of enemy military facilities and the objects that, by their nature, could be considered essentially military objectives.

Armed forces are immediately confronted with the problem of dual-use facilities,[3] particularly so in urban warfare. These are facilities that are civilian by nature but are used for both military and civilian purposes and can therefore be regarded as military objectives. There are many and varied examples, including bridges, roads, power stations and electricity distribution and transmission networks. The challenge for the armed forces, in terms of the intelligence function, is to gather as much information as possible on what use is being made of the facilities and try to determine, as accurately as possible, how this use is shared between the enemy forces and the civilian population. In the case of an oil refinery, for example, it would be necessary to establish the amount of fuel being directly supplied to enemy troops and the precise impact the destruction of the plant would have on the conduct of the enemy's operations. The share of the output destined for civilian use, to provide fuel for vehicles, heating, etc., must then also be calculated. The analysis reveals whether the facility is indispensable to the survival of the population; if so, it is entitled to special protection under IHL.[4] The analysis also determines the direct and indirect risks that the loss of these resources would have on civilians. Furthermore, the findings of the analysis would be taken into account in determining proportionality, as will be seen below.

Some questions arise in respect of the definition of objects indispensable to the survival of the civilian population provided in Article 54 of Additional Protocol I to the Geneva Conventions (AP I). Article 54 is primarily concerned with food supplies, and its main purpose is to prohibit the use of starvation as a method of warfare. The scope of application of this rule of customary law[5] is, however, broader than might first be supposed. The Preparatory Committee for the establishment of a permanent international criminal court recognized that the

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3   See Henry Shue and David Wippman, "Limiting Attacks on Dual-Use Facilities Performing Indispensable Civilian Functions", *Cornell International Law Journal*, Vol. 35, No. 3, 2002. See also Michael John-Hopkins, "Regulating the Conduct of Urban Warfare: Lessons from Contemporary Asymmetric Armed Conflicts", *International Review of the Red Cross*, Vol. 92, No. 878, 2010, available at: www.icrc.org/en/international-review/article/regulating-conduct-urban-warfare-lessons-contemporary-asymmetric-armed (all internet references were accessed in December 2016).

4   See AP I, Article 54(2): "It is prohibited to attack, destroy, remove or render useless objects indispensable to the survival of the civilian population, such as foodstuffs, agricultural areas for the production of foodstuffs, crops, livestock, drinking water installations and supplies and irrigation works, for the specific purpose of denying them for their sustenance value to the civilian population or to the adverse Party, whatever the motive, whether in order to starve out civilians, to cause them to move away, or for any other motive."

5   See Jean-Marie Henckaerts and Louise Doswald-Beck, *Customary International Humanitarian Law*, Vol. 1: *Rules*, Cambridge University Press, Cambridge, 2005 (ICRC Customary Law Study), Rule 53, pp. 186–188.

term "starvation" did not just mean killing by depriving of nourishment and water, but also covered malnutrition, illness and disease caused by a lack of food, medicines and other essential commodities.[6] Moreover, the list of protected objects given in Article 54(2) of AP I is not exhaustive, as it is preceded by the term "such as". In the case of conflicts taking place in cities, Article 54(2) must therefore be considered to have a broad meaning and to cover food storage and distribution areas and the water supply system. However, the survival of the population can also depend on other systems, such as the electricity network, which is required to heat homes and power hospitals, for example, but can also make a direct contribution to the adversary's capabilities (communications in particular). The challenge for armed forces is to assess the extent to which the civilian population depends on these dual-use facilities. In order to do this, systemic analyses carried out for intelligence purposes must be precise and fact-based, so that the direct and indirect impact of the planned destruction can be accurately measured.

In the case of conflicts in urban areas, there are two examples that clearly illustrate the practical difficulties currently facing armed forces. The issue of targeting communication systems is particularly complex. In the conduct of combat operations, the transmission of information through chains of command and control (abbreviated as C2) is vital. The destruction or neutralization of C2 systems therefore provides a real and precise military advantage. However, such networks, whether electrical, electromagnetic or digital, are most commonly dual-use facilities. It must therefore first be determined whether they can be considered indispensable to the population, taking into account that they are required, among other things, for the operation of the emergency response chain. Destroying or disabling phone towers used by the adversary, for example, is often a complicated matter. The issue of cyber-targeting in order to neutralize C2 systems is even more complex, as the effects are difficult to measure and control.[7]

The second example concerns schools, which are, by nature, civilian objects and of crucial importance to the civilian population in the short and long term, and for the country's development. The use of school premises for military purposes by regular armed forces or organized armed groups, which is becoming increasingly frequent, can turn them into military objectives, because they do not enjoy the special protection granted to certain sites, such as places of worship and cultural property.[8] Parties to a conflict often use schools deliberately, seeking to shield themselves in a civilian facility and also as a means of discrediting the adversary in the eyes of public opinion, when it is driven to attack a school. Sometimes,

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6   See Knut Dörmann, "Preparatory Commission for the International Criminal Court: The Elements of War Crimes – Part II: Other Serious Violations of the Laws and Customs Applicable in International and Non-International Armed Conflicts", *International Review of the Red Cross*, Vol. 83, No. 842, 2001, pp. 475–476.

7   On the subject of cyber-warfare, see Herbert Lin, "Cyber Conflict and International Humanitarian Law", *International Review of the Red Cross*, Vol. 94, No. 896, 2012, available at: https://app.icrc.org/e-briefing/new-tech-modern-battlefield/media/documents/29.-Cyber-conflict-and-international-humanitarian-law.pdf.

8   See the Convention for the Protection of Cultural Property in the Event of Armed Conflict of 14 May 1954, 249 UNTS 240 (entered into force 7 August 1956).

however, armed forces are compelled to use schools to temporarily store weapons and equipment or to provide shelter for their soldiers. This solution is clearly only conceivable when the premises are not being used for educational purposes. Many humanitarian organizations are justifiably concerned about the use of schools and other places of education for military purposes. One of them is the Global Coalition to Protect Education from Attack (GCPEA),[9] which in 2013 drew up the Draft Lucens Guidelines.[10] The purpose of the guidelines was to have States incorporate, first in their domestic legislation and eventually in the Geneva Conventions and their Additional Protocols, a specific ban on the use of educational establishments for military purposes. This initiative, however laudable, focuses on requirements that are not easy to reconcile: on the one hand, the protection of objects that are especially exposed and fragile, particularly in urban warfare, and whose destruction would damage prospects for future development; and, on the other, the leeway required by armed forces conducting modern operations against adversaries who have no qualms about taking advantage of the fact that the other party complies with the rules of IHL. Adding new rules to the existing body of IHL would undoubtedly be overly restrictive, as it would often be difficult to comply with them for reasons of operational effectiveness.

The specific characteristics of urban areas could also lead to a rekindling of the debate about cities as targets in themselves and the lawfulness of siege warfare.[11] Cities have always been an important factor in the power game, and in an armed conflict the taking or destruction of them can become a symbol or an end in itself. This can result in the parties ignoring basic principles of IHL, in particular the obligation to distinguish between military objectives and civilian objects. In the ongoing conflict in the Levant,[12] it is clear that efforts to take and maintain control over cities (Mosul, Raqqa, Ramadi, Palmyra, etc.) are driven by a combination of military, strategic, political and symbolic aims. This is particularly true in the case of Daesh, with its ideology of State-like territorial domination, but also for the States involved, which are seeking to restore their sovereignty. In this drive to take cities, sometimes involving prolonged sieges, the parties often overlook their obligation to take into account the provisions of the Geneva

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9   The GCPEA was established in 2010 by organizations from the fields of education in emergencies and conflict-affected fragile States, higher education, protection, international human rights law and IHL, which were concerned about continuous attacks on educational establishments and their students and staff in countries affected by conflict and insecurity.

10   GCPEA, *Draft Lucens Guidelines for Protecting Schools and Universities from Military Use during Armed Conflict*, version of 22 October 2014, available at: http://protectingeducation.org/sites/default/files/documents/draft_lucens_guidelines.pdf.

11   Siege warfare issues are particularly salient in the ongoing Syrian conflict. See, for example, UNSC Res. 2139, 22 February 2014.

12   For further information on this subject, see French National Assembly, *Rapport de la mission d'information française sur les moyens de Daech*, Report No. 3964, 13 July 2016, available at: www2.assemblee-nationale.fr/static/14/daech/rapport-daech-tome1.pdf.

Conventions,[13] which provide for agreements to be made to arrange for the evacuation and exchange of the sick and wounded and to facilitate the passage of humanitarian aid.

Distinguishing between individuals is more complicated in urban areas

While the nature of cities complicates the practical application of the principle of distinction in respect of objects, the difficulties are no fewer when it comes to distinguishing between individuals and identifying the adversary, particularly in NIAC situations. As the notion of "combatant" does not exist in the rules applicable to NIACs, the solution lies solely in determining the direct participation of individuals in hostilities.[14] The notion of direct participation in hostilities is not properly defined in the Additional Protocols, but the consequences are clear: civilians lose the protection accorded to them for the duration of their direct participation in hostilities. The International Committee of the Red Cross (ICRC) provides some insight into this notion of direct participation in hostilities in the Interpretive Guidance published in 2009,[15] which explains that it refers to specific acts meeting three cumulative criteria: a threshold of harm, a direct causal link between the act and the harm likely to result from it,[16] and the belligerent nexus (the act must be carried out in support of a party to the conflict and to the detriment of another).

In spite of these clarifications, however, the definition of direct participation in hostilities remains unsatisfactory. It is, for example, a complicated matter to draw a clear line between direct and indirect participation, particularly in conflicts in urban areas, where the precise characterization of activities can be complex. According to the Interpretive Guidance, supplying weapons to organized armed groups is not an act amounting to direct participation in hostilities, unless they are directly delivered to the zone where armed operations are taking place.[17] In urban warfare, it can be difficult to establish the facts and determine what can be considered the indirect provision of weapons and what

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13 See Geneva Convention (I) for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field of 12 August 1949, 75 UNTS 31 (entered into force 21 October 1950), Art. 15; Geneva Convention (II) for the Amelioration of the Condition of Wounded, Sick and Shipwrecked Members of Armed Forces at Sea of 12 August 1949, 75 UNTS 85 (entered into force 21 October 1950), Art. 18; Geneva Convention (IV) relative to the Protection of Civilian Persons in Time of War of 12 August 1949, 75 UNTS 287 (entered into force 21 October 1950) (GC IV), Art. 17.

14 Protocol Additional (II) to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflicts, 1125 UNTS 609, 8 June 1977 (entered into force 7 December 1978) (AP II), Art. 13(3): "Civilians shall enjoy the protection afforded by this Part, unless and for such time as they take a direct part in hostilities."

15 See Nils Melzer, *Interpretive Guidance on the Notion of Direct Participation in Hostilities under International Humanitarian Law*, ICRC, Geneva, 2009 (Interpretive Guidance).

16 It should be noted that in the Commentary on the Additional Protocols, a direct causal link is not required, just a "sufficient causal relationship". See Yves Sandoz, Christophe Swinarski and Bruno Zimmermann (eds), *Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949*, ICRC and Martinus Nijhoff, Geneva, 1987, para. 4787.

17 Interpretive Guidance, above note 15, pp. 51–52.

amounts to delivery for immediate combat purposes, given the blurred and changing boundaries of combat zones and their location in the midst of civilian objects and facilities. There is therefore a danger that all transportation of weapons and munitions could be considered direct participation in hostilities, making direct attack permissible.

It is important for armed forces not to target civilians who are taking an indirect part in hostilities, by supporting the "war effort", for example. Economic and financial aid, political support, demonstrations, etc. do not amount to acts of direct participation in hostilities, and those who engage in such activities must not be targeted.[18]

It should also be noted that the general protection granted to civilians in NIACs does not cover people fighting as part of an organized armed group – that is, a group with a certain level of organization that uses armed warfare, amongst other methods, to fight against one or more parties to the conflict. Armed forces must therefore make every effort to gather intelligence on membership of such groups, obtaining up-to-date information on participation in armed operations or meetings with influential members of the armed group, roles in the chain of command and control, the recruitment and training of fighters, etc.

In the case of the conflict against Daesh in the Levant, for example, the structure of the group means that the principle of distinction must be strictly respected, as Daesh is seeking to turn itself into a State and therefore endeavouring to acquire all the attributes of one, in particular by administrating large swathes of Iraqi territory.[19] It is therefore necessary to ensure the protection of civilians, even if they work, maybe under duress and against their will, in the administrations established by Daesh (banks, courts, law enforcement, etc.). In this context, direct participation in hostilities is not as clear-cut as in other conflicts, and attention should be paid primarily to distinguishing between the political wing and the armed wing of the non-State party to the conflict.

The situation is further complicated when, in today's so-called "asymmetric" conflicts, organized armed groups and even regular State forces seek tactical advantages in complex urban environments, using, for example, human shields, voluntary or otherwise. Human shields can be used to protect high-value targets (command centres), convoys and even whole cities when they become the last refuge of armed forces[20] or are placed under siege in the course of a conflict. Evidently, in such cases, the challenge is to respect the traditional principles governing the conduct of hostilities, which allow a military objective to be attacked, provided that the attacker fulfils its obligation to take all feasible precautions and respect the principle of proportionality in order to avoid, or at

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18   *Ibid.*, p. 56.
19   See French National Assembly, above note 12.
20   For example, during the Libyan conflict in 2011, events in September resulted in the considerably weakened loyalist forces taking refuge in certain places, such as Bani Walid, keeping the inhabitants prisoner and using them as a shield to protect them from the attacks of National Transitional Council and NATO forces.

least minimize, incidental losses. In the case of voluntary human shielding,[21] where civilians deliberately and voluntarily position themselves to protect a military objective by their presence, it could be argued that these civilians are abusing their status as protected persons. If it turned out that they had voluntarily chosen to act in this way, they could be considered, according to some sources, to be taking a direct part in hostilities for such time as their action lasted, and could therefore be deemed a legitimate target.[22] However, this view is not upheld in part of the doctrine,[23] particularly when the physical obstacle created by these individuals fails to reach the threshold of harm required for the act to qualify as direct participation in hostilities.[24]

Practical difficulties common to both facets of the principle of distinction

There are considerably greater difficulties when the attacking State does not have troops on the ground to distinguish civilians from fighters directly participating in hostilities or to confirm or refute intelligence collected for that purpose. For reasons generally based on political considerations, States are reluctant to deploy troops on the ground.[25]

In this context, one of the possible solutions, as I see it, would be to move conventional warfare out of cities, for example by limiting air strikes in urban areas and putting a very high-precision targeting system in place for cases in which it is decided that a strike must be carried out in a city.[26] This would involve planning air strikes on support "upstream" of enemy military operations, respecting the principles governing the conduct of hostilities, and wiping out the leadership of armed groups, using very precise intelligence and, in many cases, special forces to ensure highly targeted operations. In cities, the use of non-lethal means could

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21 On the question of voluntary human shields, see, for example, Antoine P. Kabore, "Do Voluntary Human Shields Participate Directly in Hostilities? An Analysis Based on the ICRC's Interpretive Guidance on the Notion of Direct Participation in Hostilities under International Humanitarian Law", thesis for master's in advanced studies, Geneva, December 2010, available at: http://archives.geneva-academy.ch/docs/award-dunant/ADH-MAS-Memoire-Kabore-2009-2010.pdf.

22 See Michael N. Schmitt, Charles H. B. Garraway and Yoram Dinstein, *The Manual on the Law of Non-International Armed Conflict with Commentary*, San Remo International Institute of Humanitarian Law, San Remo, 2006, reproduced in *Israel Yearbook on Human Rights*, Vol. 36, 2006, p. 44: "Should civilians voluntarily elect to shield a military objective or obstruct military operations, they would in almost all circumstances be taking an active (direct) part in hostilities, and, for the purpose of this Manual, could be treated as fighters."

23 See, for example, Marco Sassòli, "Human Shields and International Humanitarian Law", in Andreas Fischer-Lescano, Hans-Peter Gaser, Thilo Marauhn and Natalino Ronzitti (eds), *Peace in Liberty*, Nomos and Dike, Baden-Baden and Zurich, 2008, pp. 7–10.

24 Interpretive Guidance, above note 15, p. 57.

25 In the case of Operation Unified Protector (Libya, 2011) and Operation Inherent Resolve (Iraq/Syria, 2014), the political choice was made to confine action to air strikes and indirect support for the armed opposition groups.

26 Operation Inherent Resolve in Iraq/Syria has drawn on the lessons learned from decades of military engagement in Iraq and Afghanistan. Consequently, air strikes are few and far between, and the "no-strike lists" have been considerably extended, with the main aim of achieving zero civilian casualties.

also be promoted (psychological operations and perception-changing and cyber-activities), ensuring that the principle of distinction is fulfilled at all times.

Challenges of minimizing collateral damage in urban areas

The principle of proportionality calls for collateral damage to be minimized

The principle of proportionality is defined in paragraph 2(a)(iii) of Article 57 of AP I.[27] For the protection of civilians and civilian objects to be effective, it is necessary to ensure that all precautions are taken to reduce any incidental damage that could be caused by combat actions. Collateral damage is not prohibited by IHL, but it must be minimized. This is not only a legal requirement but also a strategic one, because a military force that causes civilian casualties could discredit the entire operation and undermine the legitimacy of the action taken.

In order to define what is meant by collateral damage, a semantic distinction must first be made, based on the degree of intentionality. Three categories can be identified, which are unforeseen, incidental and deliberate civilian harm.[28] The latter category does not fall within the definition of collateral damage, as it is always caused knowingly. In addition, as will be seen below, the implementation of a targeting oversight process, aimed specifically at reducing the risk of collateral damage, is in itself a guarantee that deliberate harm will not be done.[29] I will not therefore address the issue of deliberate harm, which results from the failure to take into account the principle of proportionality in the conduct of operations and to respect IHL in a broader sense.

Unforeseen harm can be caused, for example, by human errors or technical failures.[30] In this respect, the analysis of the US air strike carried out on 3 October 2015 on the Médecins Sans Frontières (MSF) hospital in Kunduz, Afghanistan, is particularly telling,[31] revealing an accumulation of human errors and technical failures: an AC-130 aircraft, diverted to provide air support to US and Afghan troops on the ground that had come under enemy fire, failed to implement standard "no-strike designation" procedures; the aircraft's communication system

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27 AP I, Art. 57(2)(a)(iii): "refrain from deciding to launch any attack which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated".

28 See Camilla Waszink, *Protection of Civilians under International Humanitarian Law: Trends and Challenges*, Norwegian Peacebuilding Resource Centre Report, August 2011, pp. 30–32.

29 See *ibid.*, p. 31. Possible causes of deliberate civilian harm include "ideologies of genocide/ethnic cleansing, response to attacks on civilians by the other party, strategy to displace civilian populations from an area, spread fear or control the civilian population, strategy to undermine civilian support for the war effort and end civilian resistance, civilians perceived as 'soft targets' by the weaker party in asymmetrical conflicts".

30 See *ibid.*, p. 31. Possible causes of unforeseen civilian harm include "accidents, e.g. due to technical failures or human errors, inaccurate intelligence, civilians targeted by mistake, e.g. because they were believed to be participating directly in hostilities".

31 See USFOR-A Public Affairs, statement on the Kunduz MSF hospital investigation, 2015-11-25-US-01, Kabul, 25 November 2015.

malfunctioned, preventing information exchanges with headquarters; the onboard electronic systems were degraded as the result of an alert, which forced the AC-130 to effect an emergency change of course; there was no visual target acquisition prior to the strike; the decision to carry out the strike was approved by a non-competent authority at headquarters; and the real coordinates of the site were not verified prior to the strike. In view of all these factors, the analysis concluded that the strike had caused unforeseen civilian harm.[32] In order to reduce this type of harm, armed forces must focus on improving their internal procedures and training.

Incidental civilian harm best illustrates the meaning of the military jargon term "collateral damage", and it is with the aim of reducing this type of harm that armed forces put in place oversight processes. The risk of incidental harm is particularly high in urban areas, owing to the very nature of cities and the distinction difficulties described above. Incidental harm is, however, a foreseeable risk, and efforts to ensure the continuous improvement of targeting procedures, including the choice of weapons employed, should focus on strengthening studies that combine the gathering and use of intelligence, systemic analyses and technical studies on essential functions and infrastructure, particularly in urban areas (organization and weaknesses in water and electricity networks, organization of emergency services to deal with indirect incidental damage, etc.).

Indirect collateral damage is another issue to be considered. It is not always easy to determine the cause of such damage with scientific accuracy, particularly if the strike has a delayed or cascading effect. Here too, the question of the foreseeability of damage arises.

Processes adopted to minimize collateral damage

The practical implementation of the principle of proportionality by the armed forces is therefore based mainly on the adoption of strict standard targeting procedures, particularly for planned strikes. According to French doctrine, targeting is a rational, integrated process that involves identifying and then choosing the targets to be attacked, using a range of capabilities to achieve the desired outcome. The legal constraints established by IHL are fully integrated into every stage of the process. In assessing the legitimacy of the target, the principle of distinction is applied.[33]

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32 *Ibid.*, p. 2: "The report determined that the US strike upon the MSF Trauma Center in Kunduz City, Afghanistan, was the direct result of human error, compounded by systems and procedural failures. *The US forces directly involved in this incident did not know the targeted compound was the MSF Trauma Center.* The medical facility was misidentified as a target by US personnel who believed they were striking a different building several hundred meters away where there were reports of combatants. The report also determined that the personnel who requested the strike, and those who executed it from the air, did not undertake appropriate measures to verify that the facility was a legitimate military target" (emphasis added).

33 In the targeting cycle, the first stage in the analysis of the target dossiers involves ensuring that all the criteria relating to the "military objective", within the meaning of AP I Article 52(2), are met. The relevance of the intelligence and its temporal validity are assessed for the target in question and also in the broader context of an overall assessment of the adversary's capabilities.

The next step, the collateral damage estimate (CDE), ensures that the principle of proportionality is respected.[34] This method, resembling a scientific risk analysis, takes into account the effects that weapons can reasonably be expected to have, and a level of responsibility is assigned to each level of risk.[35]

This analysis is based on knowledge of the sites to be attacked. I will not return here to the question of establishing the certainty that the object is a legitimate military target, but once this has been determined, the structure of the site must be studied (type of construction, potential weaknesses, etc.) with a view to assessing the effects of the weapons to be used, as must its surroundings (protection of nearby objects, type of buildings and infrastructure in the area around the target, state of communication, water and electricity networks, actual use of all these objects and resources, etc.).

In the case of unplanned attacks (dynamic targeting or on-the-spot combat actions), armed forces take into account the principle of proportionality in two ways. First, the rules of engagement (ROE) require combatants to implement the principle of proportionality, indicating what means are authorized in different cases.[36] Second, providing military personnel with IHL training, however general, prior to or during deployment, is a means of ensuring that IHL principles and their implementation are properly understood and fully incorporated into the conduct of operations.

Practical limitations of implementation in urban areas

The limitations inherent in the targeting process have been outlined above in relation to indirect effects. It can be argued that in the "fog of war", military planners and decision-makers cannot reasonably be expected to assess cascading effects, as the information needed to do so is never fully available in the required time.[37] This is particularly true in an inevitably complex, dense and changing urban setting. The complexity of the situation is further compounded by the deliberate use of civilian objects and human shields, often not readily visible at

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34 Once it has been established that the target is a legitimate military objective and that the foreseeable collateral damage has been minimized, the principle of precaution is implemented, determining the specific conditions of the strike (for example, the timing of the strike and advance warnings). See the sections on "Establishment of Specific Procedures and Precautions" and "The Complex Question of Giving Advance Warning", below.

35 For example, the engagement of a target with a CDE level of 5 would be decided by a hierarchically higher military authority than in the case of a target with a CDE level of 1.

36 On ROE, see French Joint Doctrine (Doctrine Interarmées), version 5.2, 25 July 2006 (currently undergoing consolidation), on the use of force in military operations conducted outside national territory, p. 19.

37 US doctrine on targeting, for example, states that military commanders are not required to take into account risks that are too far removed to be assessed at a given point in time. However, the repercussions that a strike can reasonably be expected to have should be included in the calculation of collateral damage and incidental casualties. See Joint Chiefs of Staff, *Joint Doctrine for Targeting*, Joint Publication 3-60, 17 January 2002, p. I-7, available at: www.bits.de/NRANEU/others/jp-doctrine/jp3_60%2802%29.pdf.

first sight, with a view to discrediting the attacker and "pushing" it into causing collateral damage.

Another issue to be addressed is whether proportionality should be assessed for a single strike or for a series of strikes,[38] or even the entire military campaign. Military decision-makers are more inclined to consider the effects of attacks as part of an overall plan, designed to achieve a final outcome, which is to defeat the adversary. There is therefore a natural tendency to put the focus on the principle of necessity and to weigh up potential collateral damage against an overall military advantage. The role of the legal adviser is crucial here in reconciling the different operational and legal requirements.

Modern types of conflict (with the use of means of asymmetric warfare in urban areas, including improvised explosive devices and human shields, as mentioned above) and the frequently adopted "no boots on the ground" approach make it difficult to apply the principle of proportionality in targeting processes in urban settings. Even when armed forces have deployed soldiers in the territory where the conflict is taking place, the extent to which military commanders are obligated to expose their own forces to danger in order to limit collateral damage is a question open to debate. Arguably, limiting the risks to which combatants are exposed can in itself provide a concrete military advantage.[39] This assertion is, however, only valid if the technological resources available to these same armed forces (tracking radars, drones, etc.) do not provide them with sufficient protection from the risks posed.[40]

Repeated tragedies involving civilians in urban conflict areas have prompted calls for changes to the law and practice, with a view to perhaps prohibiting collateral damage even when it is not unlawful or at least urging

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38 Article 49 of AP I defines attacks as "acts of violence against the adversary, whether in offence or in defence". This definition is, however, interpreted and applied in different ways in terms of the number and type of acts of violence that amount to an attack. For example, in its judgment in the *Galić* case, the Trial Chamber of the International Criminal Tribunal for the former Yugoslavia (ICTY) observed: "When seeking to establish whether the proportionality principle is violated, the Prosecution urges the Trial Chamber to analyze the 'concrete and direct military advantage' at the level of each sniping and shelling incident, and to consider whether the precautionary provisions contained in Article 57 of Additional Protocol I were complied with." ICTY, *The Prosecutor v. Stanislav Galić*, Case No. IT-98-29-T, Judgment (Trial Chamber), 5 December 2003, para 37. Conversely, when ratifying the Additional Protocols, the United Kingdom made the following reservation: "In the view of the United Kingdom, the military advantage anticipated from an attack is intended to refer to the advantage anticipated from the attack considered as a whole and not only from isolated or particular parts of the attack." See: https://ihl-databases.icrc.org/ihl/NORM/0A9E03F0F2EE757CC1256402003FB6D2?OpenDocument.

39 On the debate concerning the importance of force protection, see, for example, Noam Neuman, "Applying the Rule of Proportionality: Force Protection and Cumulative Assessment in International Law and Morality", *Yearbook of International Humanitarian Law*, Vol. 7, December 2004, available at: http://thirdworld.nl/applying-the-rule-of-proportionality-force-protection-and-cumulative-assessment-in-international-law-and-morality. See also David Luban, "Risk Taking and Force Protection", *Georgetown Law Faculty Publications and Other Works*, Paper 654, 2011, available at: http://scholarship.law.georgetown.edu/facpub/654/.

40 See ICTY, *Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign against the Federal Republic of Yugoslavia*, reprinted in *International Legal Materials*, Vol. 39, No. 5, 2000, paras 48–50.

States to go "beyond what is required by IHL".[41] This understandable humanitarian concern is amplified by the media, which often provides greater coverage of conflicts in urban settings, partly for practical reasons of access, but also because of the impact of such events on public opinion. This extensive media coverage sometimes masks the efforts of armed forces to reduce collateral damage and to implement protective measures.

Precautions in attack

The general rule on precautions in attack is found in Article 57 of AP I, which provides in general terms, in paragraph 1, that "[i]n the conduct of military operations, constant care shall be taken to spare the civilian population, civilians and civilian objects".[42] In addition to the principle of proportionality established in paragraph 2(a)(iii), as explained above, Article 57 contains rules concerning verification that the target is a military objective, the choice of means and methods of attack, the possibility of interrupting an attack, choosing between objectives, and advance warning.

Importance of intelligence gathering

Paragraph 2(a)(i) of Article 57 indicates that it is necessary to "do everything feasible" to verify that the target is a military objective,[43] which entails gathering complete and accurate intelligence. This can take various forms: imagery (aerial, satellite), radio, electromagnetic, human, and so on. As far as possible, information should be gathered from several different sources (for example, images corroborated by human intelligence) and should be recent (satellite images no more than several days old, communications recently intercepted, etc.). Generally, military intelligence services use standard codes to "track" the accuracy of intelligence. There are, however, some practical difficulties in terms of intelligence, which is the cornerstone of a precise targeting process that respects the applicable rules.

      The gathering of relevant intelligence requires well-developed, reliable and even redundant technical resources. Not all States, for example, are able to acquire high-quality satellite images, and military satellite capabilities vary significantly

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41 See C. Waszink, above note 28, p. 37: "[I]t may be time to start discussing how much civilian harm is acceptable even when it is not in itself unlawful and whether more can be done by parties to armed conflicts to minimise civilian harm. The measures taken by, for example, ISAF forces in Afghanistan demonstrate that there may be considerable scope for doing so even beyond what is required by IHL in a very strict sense, and that this may indeed be beneficial on both humanitarian and military grounds."

42 Article 57(4) of AP I also provides: "In the conduct of military operations at sea or in the air, each Party to the conflict shall, in conformity with its rights and duties under the rules of international law applicable in armed conflict, take all reasonable precautions to avoid losses of civilian lives and damage to civilian objects."

43 Article 57(2)(a)(i) of AP I states that those planning or deciding upon an attack shall "do everything feasible to verify that the objectives to be attacked are neither civilians nor civilian objects and are not subject to special protection but are military objectives within the meaning of paragraph 2 of Article 52 and that it is not prohibited by the provisions of this Protocol to attack them".

from one State to another (in terms of image resolution, in particular). The quality of intelligence is enhanced by the physical presence of human gatherers (conventional or special forces) in the theatre of operations. In the case of "no boots on the ground" operations, this human intelligence is lacking, and it is unrealistic to think that technology alone can resolve this deficiency. When the intelligence comes from "local" sources (allied forces, rebel fighters, etc.), the party involved must be able to verify the accuracy and objectivity of the information before taking responsibility for a strike based on the information received.

In a coalition military operation, it must be possible to share intelligence and for the intelligence provided by the coalition or States belonging to it to be "questioned" and controlled by national means of verification. Difficulties exist on two levels: on a technical level (means of verification at least equivalent to those of allied forces) and in terms of classification (information exchange agreements in order to access all target documentation).

The importance of today's open sources for obtaining intelligence should not be underestimated: the Internet (Google Maps), NGOs operating on the ground, think-tank reports, journalists, etc. While such sources should be fully taken into account, closer monitoring of their accuracy is nonetheless required, and this is a limitation that today's armed forces must be aware of.

Issues relating to choice of weapon in urban areas

Paragraph 2(a)(ii) of Article 57 of AP I is concerned with the choice of means and methods of warfare,[44] which must be made with a view to limiting collateral damage. Even before the targeting process, armed forces are limited in their choice of weapons by the provisions of international law. For States party to the conventions concerned, the use of certain weapons[45] is regulated or, in some cases, banned. For example, a State such as France could not include the use of cluster bombs in a deliberate targeting process, because it has ratified the Oslo Convention.[46]

Two precautions are generally taken when it comes to choosing permitted or regulated weapons. First, the most precise weapon should be chosen.[47] This not only ensures the application of the principle of proportionality, but is also a guarantee of technical, operational and even financial effectiveness. Second, with a view to minimizing potential collateral damage, all the effects of the weapon

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44 Article 57(2)(a)(ii) of AP I states that those planning or deciding upon an attack shall "take all feasible precautions in the choice of means and methods of attack with a view to avoiding, and in any event to minimizing, incidental loss of civilian life, injury to civilians and damage to civilian objects".

45 Examples include chemical and biological weapons, incendiary weapons, mines and cluster munitions.

46 Convention on Cluster Munitions, 2688 UNTS 39, 3 December 2008 (entered into force 1 August 2010), available at: www.clusterconvention.org/the-convention/convention-text/.

47 This has long been the case for bombs dropped by aircraft (laser- and GPS-guided). More recently, in France, the development of the *Caesar* self-propelled howitzer and the guided unitary multiple launch rocket system, as well as the work carried out on GPS-guided shells and rockets, demonstrates that precision is at the centre of military developments. See Rudolph Stamminger, "Peut-on encore faire la guerre sans armes de précisions?", *Le Monde*, 13 September 2012.

must be taken into account: the effects of the actual impact and also the blast and fragment effects caused by the impact. These effects are the subject of very precise scientific studies, using input from the evaluation of damage caused by past strikes (known as battle damage assessment), which ensure that predictive calculations are as accurate as possible.

Lastly, I would like to comment on the current trend, undeniably commendable in its intention to increase protection for civilians, towards seeking to impose more constraints on armed forces which they would find difficult to implement for operational reasons and which would be applied indistinctly to all armed forces, without taking sufficient account of efforts made to respect the relevant provisions of IHL. A telling example is the current mobilization against the use of explosive weapons in urban areas. While there is no question about the destructive effects of explosive weapons in densely populated areas, such effects are largely due to a lack of proper oversight in the use of these weapons or to too broad an interpretation of the principles of distinction and proportionality. In truth, strict application of the principle of precaution will, in the vast majority of cases, rule out the use of this type of weapon in populated areas.

Establishment of specific procedures and precautions

Article 57 also requires procedures to be put in place for suspending or cancelling an attack[48] and for choosing between several targets.[49] The fact that there are highly standardized targeting procedures and that target dossiers are studied before choices are made by decision-making authorities is an implicit acknowledgement of the possibility of choosing between targets and also allows for the implementation of decision-making processes taking into account the level of risk involved. In addition, the use of video footage from drones, for example, makes it possible to follow a strike live, which means that it is now easier to suspend a strike when a change in the environment is detected (for example, the presence of civilians).

In the process of approving a target pack, other precautions can also be taken, whether technical (aircraft angle of attack, use of weapons with a delay fuse) or of a more general nature (night strikes, for example). The timing of the attack is an essential factor in the application of the principle of precaution. With a view to choosing the right time, accurate data must be collected about the situation on the ground, in particular information about the way of life and customs of the civilians at risk.

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48 AP I, Art. 57(2)(b): "[A]n attack shall be cancelled or suspended if it becomes apparent that the objective is not a military one or is subject to special protection or that the attack may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated."
49 AP I, Article 57(3): "When a choice is possible between several military objectives for obtaining a similar military advantage, the objective to be selected shall be that the attack on which may be expected to cause the least danger to civilian lives and to civilian objects."

Current doctrinal developments focus on what is referred to as "full-spectrum targeting", including both kinetic and non-kinetic (cyber, influence, etc.) operations, whether carried out separately, sequentially or concurrently. Different means are ultimately chosen and employed, taking into account the risk of collateral damage and fulfilment of the principle of precaution, with a view to achieving the same desired end-state while minimizing the risks.

The complex question of giving advance warning

In accordance with the principle of precaution, the attacker can also urge civilians to leave the combat or strike area by issuing an advance warning, as provided for in paragraph 2(c) of Article 57 of AP I.[50] However, for these warnings to be effective, they must meet numerous criteria:[51] a range of means of communication must be used (television and radio broadcasts, telephone calls, leaflets, etc.) to ensure that those at risk from attacks are reached; the warnings must indicate the time and place of the attack as clearly as possible; they must give sufficient time to react; they must contain precise instructions on how to avoid the attack (where to go, evacuation measures, etc.); and the messages must be credible. Given these constraints, in my view, the level of effectiveness of such warnings is very low, particularly in certain circumstances when the territory is small and there is intense fighting everywhere.[52] It should not be forgotten either that a party to a conflict has an obligation to give advance warning "unless circumstances do not permit" – that is, provided that the warning does not put the party's own forces in danger and/or spoil the element of surprise.

In modern asymmetric conflicts, however, the element of surprise is not always such a decisive factor. It would be easier for armed forces with advanced technological resources to fulfil the obligation to give advance warning, even when they do not exercise effective control over a territory. This was a conclusion that emerged from a United Nations (UN) document published in 2006 on the situation in the occupied territories, in which the Secretary-General suggested that the greater the resources the attacker has at its disposal (communication and surveillance systems, in particular), the greater its obligation to ensure that the

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50 AP I, Art. 57(2)(c): "[E]ffective advance warning shall be given of attacks which may affect the civilian population, unless circumstances do not permit."

51 See Report of the United Nations Fact Finding Mission on the Gaza Conflict, UN Doc. A/HRC/12/48, 25 September 2009.

52 It is interesting to note that during Operation Cast Lead, 2.5 million leaflets were dropped and around 16,500 phone calls were made by the Israeli armed forces. The leaflets contained both generic warnings (urging the people of Gaza to move away from combat zones) and local warnings (indicating the time of the evacuation and designating specific routes to safe areas). More specific warnings were then given by telephone. In spite of these efforts, the Fact Finding Mission considered these actions to be insufficient, citing "the lack of specificity and thus credibility of many pre-recorded phone messages and leaflets. The credibility of instructions to move to city centres for safety was also diminished by the fact that the city centres themselves had been the subject of intense attacks during the air phase of the military operations." See *ibid.*, para. 37.

principle of precaution is fulfilled by giving advance warning, particularly in conflicts taking place in urban areas.[53]

Precautions against the effects of attacks

The general rule concerning protection against the effects of attacks is provided in Article 58 of AP I.[54] This article is not about regulating the behaviour of combatants in attacks, but rather encompasses all the measures that all powers should take in their own territory or territory that they control in order to protect the people there. They are therefore preventive measures aimed at ensuring effective protection for civilians. The requirement to take precautions against the effects of attacks is a rule to be taken into account in peacetime, but also takes on particular significance in the planning of attacks and in the conduct of operations. It is not, however, an absolute rule, as Article 58 starts by providing that the parties to the conflict should implement it "to the maximum extent feasible" and specifies that it refers to territories and populations "under their control". As indicated in the ICRC's study on customary international humanitarian law, the rule concerning protection from the effects of attacks can be divided into two sub-rules, specifically the need to locate military objectives away from civilians[55] and the need to remove civilians from the vicinity of military objectives.[56]

Locating military objectives away from civilians

The principle stated in paragraph (b) of Article 58 of AP I involves taking preventive or protective measures in peacetime. It is therefore necessary for the party that can be referred to as the "defender" to ensure that certain types of building intended for military use (barracks, ammunition depots, etc.) are not erected in certain places (specifically in towns or cities), to avoid locating military objectives in certain areas and to keep dangerous points away from civilians. This obligation is, however, limited to what is feasible. Many States interpret this notion of "to the maximum extent feasible" as meaning that they have to take the precautions that are materially or practically possible, taking into account the prevailing

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53 Note by the UN Secretary-General, "Situation of Human Rights in the Palestinian Territories Occupied since 1967", UN Doc. A/61/470, 27 September 2006, para. 7. See also Sylvain Vite, "Typology of Armed Conflicts in International Humanitarian Law: Legal Concepts and Actual Situations", *International Review of the Red Cross*, Vol. 91, No. 873, 2009, pp. 83–85.

54 AP I, Art. 58: "The Parties to the conflict shall, to the maximum extent feasible: (a) without prejudice to Article 49 of the Fourth Convention, endeavour to remove the civilian population, individual civilians and civilian objects under their control from the vicinity of military objectives; (b) avoid locating military objectives within or near densely populated areas; (c) take the other necessary precautions to protect the civilian population, individual civilians and civilian objects under their control against the dangers resulting from military operations."

55 See ICRC Customary Law Study, above note 5, Rule 23, pp. 71–74.

56 *Ibid.*, Rule 24, pp. 74–76.

circumstances, including military considerations (no questioning of the overall defence strategy, for example) and humanitarian considerations (the measures should not create too much hardship for civilians). It should be noted that demographic changes and the extension of urban areas can prove an obstacle to locating military facilities outside towns and cities in the long term. The principle does not apply to civilian objects that can also be used for military purposes (stations, airports, etc.).

It is worth noting that this obligation to take precautions is harder to fulfil in NIAC situations, particularly by organized armed groups, which may be of recent or spontaneous creation and have no pre-existing military facilities. Such groups are therefore limited in the choice of where to locate their military facilities and may have limited resources, making them unable to implement preventive measures.

It is easier to implement the principle of separation in the case of fixed objectives than in the case of mobile ones (troops, vehicles, etc.) because, for the latter, precautions must be taken while operations are in progress. The challenge for parties to a conflict is clearly identifying their military forces without compromising the safety of those forces. Precautions could therefore include decisions to limit the passage of convoys through cities (bypassing them, where possible), setting up camps and positions outside cities, ensuring zones are clearly marked, restricting access, training military personnel so that they can inform civilians, etc. Evidently, the main risk of such identification measures is that the party is giving the adversary a clear indication of the location of its military objectives. The solution is to carry out a case-by-case analysis in order to weigh up the military expediency of locating troops in a specific, clearly identified place and the threat that this poses to those forces if the location is too visible.

Looking at this issue from the perspective of the party that can be referred to as the "attacker", it is important to remember, first of all, that it is not unlawful to target military objectives if the defender fails to take the necessary precautions or if it deliberately uses civilians to shield its military operations. In such cases, the attacker must take precautions in attack and respect the principle of proportionality, even if the defender does not comply with the rules of IHL.[57]

One solution that can be adopted by the attacker with a view to implementing the principle of precaution against the effects of attacks is to drive the adversary towards isolated areas. This was, in some respects, what France sought to do in Operation Serval, conducted in Mali from January 2013 onwards at the request of the Malian State.[58] Faced with an adversary intent on taking control of the country's cities, including the capital Bamako, the French armed forces sought to repel the enemy by engaging in minimal urban combat, limiting

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57   On this subject of the non-reciprocity of IHL, see, for example, ICRC Customary Law Study, above note 5, Rule 140, pp. 498–500.

58   On the subject of French military intervention in Mali, see, for example, Jean-Christophe Notin, *La guerre de la France au Mali*, Tallandier, Paris, 2014.

the scope and number of operations through the deployment of special forces.[59] Local forces were given the responsibility of retaking the cities, while the special forces focused their efforts on pursuing the armed groups, monitoring and controlling supply points to prevent the enemy from replenishing supplies in the cities and maintaining a show of force in urban areas while at the same time continuing to fight the enemy in isolated areas. This strategy does, however, have its limitations, particularly when conflicts extend over a long period, as it can result in all of the fighting taking place outside urban areas, turning the cities into a safe haven for the enemy.

As it is so difficult, if not impossible, for defenders and attackers to separate military objectives from civilians, they might find it preferable to move civilians away from military objectives.

Moving civilians away from military objectives

Compliance with paragraph (a) of Article 58 also requires, in the case of the defender, the implementation of preparatory measures such as the construction of dedicated infrastructure for civilians (shelters, buildings, camps, food depots, etc.), the involvement of civil society (regular training for civil defence services) and the regular dissemination of information and warnings. Once again, these measures are easier for States to implement than armed groups, particularly when the latter's structures are weak.

The attacker can also contribute indirectly to moving civilians away from the fighting by establishing air and maritime exclusion zones, which involves delimiting areas that the enemy is not permitted to enter and where civilians are relatively safe, although violations of such zones can lead to fighting that will have repercussions for civilians. In any event, the establishment of exclusion zones raises the question of access to humanitarian aid, which the attacker must also deal with, in addition to complying with overflight/passage prohibitions. The difficulties involved in managing such zones should not be underestimated, and it should be taken into account that they require significant resources for distinction and information activities. This difficulty is compounded when humanitarian organizations or States delivering aid do so without first notifying the authorities responsible for managing the zone, a problem NATO forces had occasion to observe during operations in Libya in 2011.

Another precaution is evacuation operations that can be carried out directly by the attacker, particularly if it controls the conflict area. Evacuation of the nationals of a particular State[60] not only raises issues with regard to *jus ad*

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59 On this subject, see the work of the French Commission on Foreign Affairs, Defence and the Armed Forces on the French special forces, available at: www.senat.fr/les_actus_en_detail/article/forces-speciales-francaises.html.

60 Known as RESEVAC operations in French military doctrine.

bellum,[61] but also poses problems of discrimination. Is it legitimate, or even lawful, for a party to evacuate only its own nationals[62] and do nothing for foreign nationals suffering abuse, for example? There is, however, no positive obligation in law to evacuate civilians from a country affected by conflict. If civilians had to be evacuated by an attacker in a conflict area, the operation would have to meet the same criteria as those outlined above for defenders, although to a lesser extent, and its implementation would therefore present the same practical difficulties.

The evacuation of civilians by the defender raises numerous questions. First, does the obligation extend to all civilians or just some categories of people entitled to special protection (women, children, the sick, the disabled, etc.)? Apart from the fact that it is very difficult for a party to a conflict to distinguish between people in this way, it should also be noted that the legitimate desire to protect the weaker sectors of the population may conflict with the principle of respecting family unity, which is to be found in numerous provisions of IHL and human rights law.

If it is assumed that civilians in the immediate vicinity of the fighting should be evacuated, the question also arises of how to precisely delimit the boundaries of the combat zone and what to do when the territory is very small. A number of questions arise in relation to the place that civilians are evacuated to, normally a place that they are familiar with and that poses no danger to them. Should civilians be informed in advance of the place they are being evacuated to, so that they can make an informed choice about whether or not to go? How can safety zones be maintained without putting too great a strain on already stretched military resources? And, once again, is this feasible in a small, conflict-ridden territory?

Lastly, with regard to the timing of the evacuation, here again caution is paramount. Evacuating civilians during the fighting can be dangerous, particularly in urban areas, but waiting until the fighting is over can prove disastrous. In any event, parties to a conflict are only required to do what is "feasible", and the precautions to be taken in evacuating civilians should not go beyond the point where their lives are made difficult or even impossible.

It is important to note that there are provisions prohibiting the forced movement of civilians, which are applicable both in international armed conflicts (IACs) and NIACs.[63] In both types of conflict, forced displacement is prohibited unless the security of the civilians involved or imperative military reasons require them to be moved.[64] Even when permitted, the movement of civilians is limited, in the case of IACs, to displacement within the occupied territory, unless

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61 For instance, whether the use of force in the evacuation of nationals for humanitarian reasons can be considered an exception recognized in customary law to the prohibition on recourse to force between States, or whether it is simply permitted, in certain circumstances, because such an intervention is not deemed to constitute the use of force between States.

62 French nationals or members of the European Union in the case of France.

63 In IACs, deportations and forcible transfers are prohibited (GC IV, Art. 49), and in NIACs, the forced movement of civilians is prohibited (AP II, Art. 17).

64 See ICRC Customary Law Study, above note 5, Rule 129, pp. 457–462.

materially impossible, and in the case of NIACs, within the national territory. Clearly, the imperative military reasons that permit an exception to this rule do not include the movement of civilians as a means of persecution. The most sensitive issue here, however, is evaluating the safety of civilians to determine whether it is necessary to evacuate them. Who should make this assessment, and what criteria should be used?

Indirect contribution to the protection of civilians

With a view to ensuring the protection of civilians, IHL provides for the possibility of establishing protected areas for the purpose of moving the inhabitants of cities away from the fighting.[65] There are three types of protected area: "hospital zones" for wounded and sick members of the armed forces (Article 23 of the First Geneva Convention), "hospital and safety zones and localities" for civilians entitled to particular protection (Article 14 of the Fourth Geneva Convention) and "neutralized zones" for people *hors de combat* (Article 15 of the Fourth Geneva Convention). Parties to a conflict also have the possibility of declaring a place a "non-defended locality" (Article 59 of AP I) and establishing agreements to demilitarize certain zones (Article 60 of AP I). Although there is no provision for such zones in the law applicable to NIACs, it is clear that an area which contains only wounded and sick people, medical and religious personnel, humanitarian relief personnel and civilians may not be attacked, because there are specific rules applicable in NIACs protecting these categories of people.[66]

These provisions list the rights and obligations of the parties in great detail, with a clear distribution of responsibilities for the protection of the people gathered in such zones. However, the *sine qua non* condition for their effectiveness is that they are established with the full knowledge and express consent of all the actors.

The advantages of establishing protected zones are patently evident: they allow a clear distinction to be made between military objectives, on the one hand, and civilians and civilian objects, on the other, and facilitate the arrangement and delivery of humanitarian assistance. However, there are also numerous risks, as they concentrate large numbers of defenceless civilians in one place. In addition, if the agreement between the parties is deficient or flawed in some way or there are insufficient resources to protect the zones, the consequences could be tragic. There is no forgetting the case of the Srebrenica enclave, a "safe zone" established unilaterally by Resolution 819 of April 1993,[67] because the UN Security Council refused to engage in talks with the Republika Srpska. The fact that there were not

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65 Neutralized zones had already been established in the past – for example, in Madrid in 1936, in Shanghai in 1937 (Jacquinot safe zone) and in Jerusalem in 1948 (agreement between Va'ad Leumi, the Jewish armed organization, and the Arab League, allowing the ICRC to create a safe zone in order to provide shelter to civilians). It was this latter initiative that inspired the provisions on this subject included in the Geneva Conventions of 1949.

66 See ICRC Customary Law Study, above note 5, Rule 35, p. 119–120.

67 The concept was subsequently extended to other cities: Tuzla, Zepa, Bihac, Gorazde and Sarajevo in May 1993.

enough UN troops (600 Blue Helmets) to protect it and the many other shortcomings revealed since resulted in the infamous massacres of July 1995.[68]

In the context of the Syrian conflict, there have been renewed calls for the establishment of "free zones"[69] on the Turkish border in the north and/or on the Jordanian border in the south, as sanctuaries for refugees. The intention is commendable, and such an initiative would allow certain principles of IHL to be fulfilled. There are, however, many unresolved issues: how can an agreement be secured between the belligerents, and between which parties would it be established (there are several NIACs taking place simultaneously in Syria[70])? What can be done to prevent such zones from being misused, for example, as safe havens by rebel groups? How can the implementation of these humanitarian principles be achieved in a conflict in which the *modus operandi* of the different parties involves deliberately targeting civilians?

Protection of civilians by armed forces can also be included in the conduct of operations as a general guideline and not solely in the implementation of the principle of precaution against the effects of attacks. This would involve a comprehensive approach, including support and protection measures, to ensure that civilians do not suffer unduly from the consequences of the fighting. It would include so-called civil-military activities, aimed at rehabilitating infrastructure, improving access to health-care services and directly providing medical care to civilians through military facilities (hospitals and medical personnel). This comprehensive vision, with a long-term focus on rebuilding a State and restoring its institutions, must also be accompanied by measures aimed at protecting civilians from violations and ensuring that perpetrators do not enjoy impunity. The military must be permitted to use force and intervene in order to prevent and end human rights violations and capture those responsible, while at the same time respecting the sovereign prerogatives of the State in whose territory it is intervening.

Conclusion

The conduct of military operations in urban areas today presents a daunting challenge. Efforts to implement the principle of distinction effectively and reduce collateral damage must be radically increased. This is particularly complicated when there are no troops on the ground, and realistically, technology alone cannot be expected to overcome all the difficulties posed. Must this reasoning then be taken to its logical conclusion, which would be that the effective implementation of the principles of IHL requires a physical presence on the

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68 See, for example, Pierre Salignon, "Le massacre de Srebrenica", *Revue Humanitaire*, Autumn/Winter 2008. See also NIOD Institute for War, Holocaust and Genocide Studies, *Srebrenica Report*, 10 April 2002, available at: www.niod.knaw.nl/en/srebrenica-report/report.

69 See the testimony given by General Keane at the US Senate hearing held early in October 2015.

70 See RULAC (Rule of Law in Armed Conflicts), "Country Profile: Syria", Geneva Academy, October 2015, available at: www.rulac.org/countries/syria.

ground and therefore the deployment of armed forces in massive numbers to the territories where conflicts are taking place, just the opposite of today's prevailing "no boots on the ground" approach? This would, in fact, also be a sound application of the principle of military necessity.

The difficulties encountered in implementing preventive and protective precautionary measures often arise from the collapse of State structures, whether the cause of the conflict or one of its consequences. A comprehensive vision with a long-term and not exclusively military focus should therefore prevail in this type of situation, with a view to rebuilding institutions and securing the future. This reflection is in keeping with the current line of thinking that has emerged in the updating of urban warfare doctrines.[71]

French doctrine on urban operations,[72] which has undergone significant developments since 2010, emphasizes the fact that a city is a space replete with restrictions and risks. The "Three Block War" concept[73] reflected in this doctrine highlights the fact that, in cities, military units have to engage successively or simultaneously in enforcement, peacekeeping and humanitarian operations, compressed in the same time and space. The implications are threefold. First, integration and cooperation with civilian actors is necessary, particularly with regard to protection. Second, it is vital to maintain essential services and structures indispensable to restoring governance, as part of a comprehensive approach. Lastly, the strategy must include the means to isolate the adversary from civilians, particularly the urban population, by limiting its resources, undermining its freedom of action and conducting information and influence operations.

The implementation of such principles can then contribute to ensuring protection for civilians in urban areas and application of the rules of IHL concerning precautions against the effects of attacks.

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71 It is worth noting that counter-insurgency tactics in urban environments are nothing new (the Battle of Algiers and the strategy implemented by General Petraeus in Afghanistan, for example). All have shown that conflicts are not won with the systematic destruction of urban areas, but with a combination of actions, including human intelligence, targeted neutralization designed to preserve the lives of civilians, and a comprehensive approach ("winning hearts and minds") focused on not losing the support of the inhabitants and securing the future.

72 See the French Joint Doctrine, No. 234/DEF/CICDE/NP, 30 September 2010, amended on 8 May 2012, available at: http://portail-cicde.intradef.gouv.fr/RDIA-2010-005-Les-operations-urbaines-OPURB.

73 The "Three Block War" concept was coined in the late 1990s by US Marine General Charles Krulak to illustrate the challenges facing US Marines in operations such as the one carried out in Somalia in 1993. The main thrust of the theory is that military personnel must be trained to operate simultaneously in all three types of environment encountered today: full-scale military action, peacekeeping operations and humanitarian aid.

The ICRC's approach to urban services during protracted armed conflict: Q & A with Evaristo de Pinho Oliveira

Evaristo de Pinho Oliveira is the head of the International Committee of the Red Cross (ICRC) Water and Habitat Unit. He started working with the ICRC as a water and sanitation engineer in 1995. Over the next ten years he completed missions in Bosnia-Herzegovina, Angola, Iraq, Sudan and East Timor, and provided water and habitat support to the ICRC's regional delegations in Asia. He then was based at ICRC headquarters in Geneva, where he held several positions supporting field operations in Asia, the Middle East and Eastern Europe. In 2016, he co-authored the ICRC's report on Urban services in protracted armed conflict: A call for a better approach to assisting affected people*. Prior to working at the ICRC, he worked in Quebec as an engineer and as a teaching assistant at McGill University.*

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In this Q & A, Evaristo de Pinho Oliveira outlines what is necessary to bring about a change in course from conventional humanitarian and development approaches to be able to effectively maintain public services throughout protracted armed conflict in urban contexts.

The experience gained from addressing the challenge of maintaining public services (for example water, sanitation, electricity, and solid waste disposal) over time has taught us that the underlying causes of those challenges do not receive the attention they deserve. Even their symptoms are difficult to deal with through short-term emergency response. Addressing these challenges is all the more difficult when the complexity inherent in urban contexts is compounded by repeated cycles of armed conflict and international sanctions or other restrictions on importing goods. The ICRC's experience and research suggests that a new humanitarian era needs to be ushered in, where nothing less than a paradigm shift in our thinking is necessary, to design and implement interventions that are more effective for assisting affected people.

In 2015, the ICRC published a report entitled *Urban services during protracted armed conflict: A call for a better approach to assisting affected people*,[1] as part of an ongoing reflection on this topic. Evaristo de Pinho Oliveira discusses that reflection with the *Review* below.

ICRC Water and Habitat activities

The ICRC's Water and Habitat Unit provides assistance to millions of people whose lives have been disrupted in armed conflict zones or other situations of violence by restoring vital essential services.

Working within the Assistance Division, which addresses issues related to health, economic security, forensic services and weapons contamination, the Water and Habitat Unit tackles the direct, indirect and cumulative impact on essential infrastructure, preventing environmental health hazards. Sustainable strategies are built into emergency responses. Field delegates working for the Water and Habitat team assess the environmental health-related needs of the concerned population, including displaced persons, detainees and civilians, as well as design and plan need-responsive projects. Additionally, they supervise and manage all these activities, negotiating with the local authorities and civil society to ensure that essential services are restored and maintained.

Activities in urban and rural areas affected by armed conflict and over situations of violence as well as in places of detention range from ensuring the supply of safe drinking water, sanitation and environmental health, the building and rehabilitation of essential infrastructure, and energy saving solutions.

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1 ICRC, *Urban Services in Protracted Armed Conflict: A Call for a Better Approach to Assisting Affected People,* Report, 2015, available at: https://www.icrc.org/eng/assets/files/publications/icrc-002-4249.pdf.

Can you describe the "urban challenge" in armed conflicts for humanitarian agencies? Why is it important to address this issue now?

Currently, some 50 million people worldwide are affected by armed conflict in urban areas, with knock-on effects that go far beyond the visible signs of destruction.[2] Most of these people are more dependent on essential services than their rural compatriots, making them more vulnerable to service disruptions. Considering that armed conflicts are increasingly played out in urban areas where millions of people are vulnerable to degraded basic services, or lack of access to them, this problem deserves much greater attention. Today there are multiple armed conflicts playing out in parallel, along with a general trend of rural to urban migration, which has created unprecedented humanitarian needs in urban areas. The evolution of armed conflict towards asymmetric warfare in urban areas coupled with urbanization – the rapid growth of cities – has increased the level of inherent risk to the onset of a destabilizing event, regardless of whether it is armed conflict or a natural disaster. Urban areas are clearly complex places for humanitarian agencies to work in, both logistically and politically, owing to the magnitude and duration of the challenges and the sensitive network of interpersonal relationships. This problem continues to challenge conventional humanitarian approaches.

Since urban areas host residents that typically have a higher dependence on basic services, they tend to be more vulnerable for a whole host of reasons, including the sophistication of large-scale infrastructure, potentially fragile governance structures and complex logistics, just to name a few. The complexity of engaging on essential services in urban environments is a function of the sheer scale of the challenge and the duration of the response required to restore or maintain service delivery. If left unattended, such impacts can accumulate to a point where traditional humanitarian programming becomes less effective than required to maintain or, at the very least, stabilize a given service.

However, much can be done regarding the modalities of how humanitarian assistance interventions are designed and implemented in order to bring about a better approach to assisting affected people in urban areas. In parallel with the changes required in our operational approach, we also need to address the fact that we have witnessed insufficient respect for international humanitarian law (IHL) in many of today's conflicts where critical water, sanitation and electricity infrastructure (all of which are civilian objects) have not been immune from the extensive destruction in urban areas.[3] Still, even if IHL is perfectly respected, there may be harm to infrastructure during armed conflict, although it would likely be less extensive. As long as civilian objects risk being damaged by the conduct of

2 For further discussion, see the articles by Isabel Robinson and by Mark Zeitoun and Michael Talhami in this edition of the *Review*.
3 Editor's note: For an example of the general lack of respect among warring parties for the protected status of water installations as an essential service, see ICRC, *Bled Dry: How War in the Middle East is Bringing the Region to the Brink of a Water Catastrophe*, Report, 2015, available at: https://www.icrc.org/en/document/bled-dry-how-war-middle-east-bringing-region-brink-water-catastrophe.

hostilities, the consequences will be that large parts of the population remain vulnerable to a lack of access to essential services. This is first and foremost a public health concern, but also threatens livelihoods and can prompt displacement.

***Recently, international attention has increasingly been given to the extensive harm caused to infrastructure, including essential services, by the conduct of hostilities in urban areas. What does international humanitarian law have to say about this?*[4]**

Each of the three components of any essential service – people, hardware, and consumables – is covered by the general protection from direct attack afforded to civilians and civilian objects under IHL. Despite this legal protection, there are several key challenges that partly arise from a lack of respect for IHL in some contexts, as well as from certain types of weaponry used in urban areas. IHL includes object-specific protection for potential targets of attack and does not expressly acknowledge the interconnectivity or the increasing complexity, and thus vulnerability, of essential services in urban areas. This interconnectivity can and ought to be taken into account through the rules of proportionality and precautions in attack.

Running and maintaining urban services in protracted armed conflicts requires taking advantage of opportunities to mitigate the effects of explosive weapons. ICRC strives to engage with all of the parties to a conflict in a bilateral confidential dialogue to promote the need for greater compliance with IHL. The ICRC has continuously strived to mitigate the humanitarian consequences through other means, including by emphasizing that the use of explosive weapons with a wide impact area should be avoided in densely populated areas due to the significant likelihood of indiscriminate effects.

What is particular about essential services in urban areas? Where are they most vulnerable and what additional risks are posed by protracted violence?

Maintaining urban services during protracted armed conflicts is a complex endeavour. The complexity of the challenge is a result of both the uncertainty about the timing and nature of the violence, and the complicated social and infrastructure networks in urban areas. Very distant active combat can have a dramatic effect on urban dwellers if, for instance, an electrical power generator, supply road or water treatment plant is attacked or damaged by an attack on another target, cutting off that source of power, supplies or water from the city even if located far away. Such damage could possibly displace people into the urban areas, further increasing pressure on services.

Services can come under a variety of strains as any of the three interdependent components of a service can be compromised: **people** (especially operations and maintenance staff), **hardware** (e.g. infrastructure, equipment), or **consumables** (such as fuel, chlorine, medicine) (see Figure 1). No one component is sufficient on its own; it is pointless having spare parts if the only staff able to

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4   See the Q&A on explosive weapons in populated areas that also appears in this edition for more on the IHL rules relevant to this topic.

Figure 1. The three essential components of urban services are people, hardware and consumables.

install them have fled the fighting or do not have safe access to undertake repairs. As some components are located beyond the city limits, we propose a tailored working definition of "urban": the area within which civilians vulnerable to disruptions in essential services reside and the network of components supporting those services. In the absence of a broadly recognized definition for an "urban context" the ICRC has opted to define it as "the area within which civilians vulnerable to disruptions in essential services reside and the network of components supporting those services."[5]

Urban services are interdependent. For instance, damage to an electrical transformer can immediately shut down the water supply to an entire neighbourhood or hospital, which will in turn negatively impact public health. The set of skills and planning capabilities required to best address such interconnectivity is often beyond the scope of humanitarian operations. This needs to change if humanitarian actors are to be able to provide more effective assistance aimed at mitigating the consequences, be it on public health, livelihoods and/or displacement.

Armed conflict can impact any or all of the components of a service either directly, for instance a reservoir pierced by a tank shell or shortages caused by trade sanctions, or indirectly, for example insecurity can prevent staff from gaining safe access, curtailing the maintenance required to keep a power supply system operational in the long run (see Figure 2). The combination of direct and indirect impacts over time are cumulative, making them more difficult to address. As they become progressively worse, so does life for residents.

In the worst cases, vicious cycles may arise, where the cumulative effect takes hold to the extent that it precludes a response. This is most likely to happen during protracted conflicts. By combining and accumulating, the impact may ultimately lead to increased disparity in quality of services, and an outbreak of communicable diseases. Such degradation can exacerbate existing social tensions, and may contribute to the very conflict which created it.

Given this combination of direct and indirect impacts, what needs to be considered if essential services are to be maintained or at least stabilized?

The humanitarian sector is clearly more focused on reacting to direct impacts (typically on infrastructure), while inadequately responding to challenges arising from indirect impacts on people and consumables that infrastructure
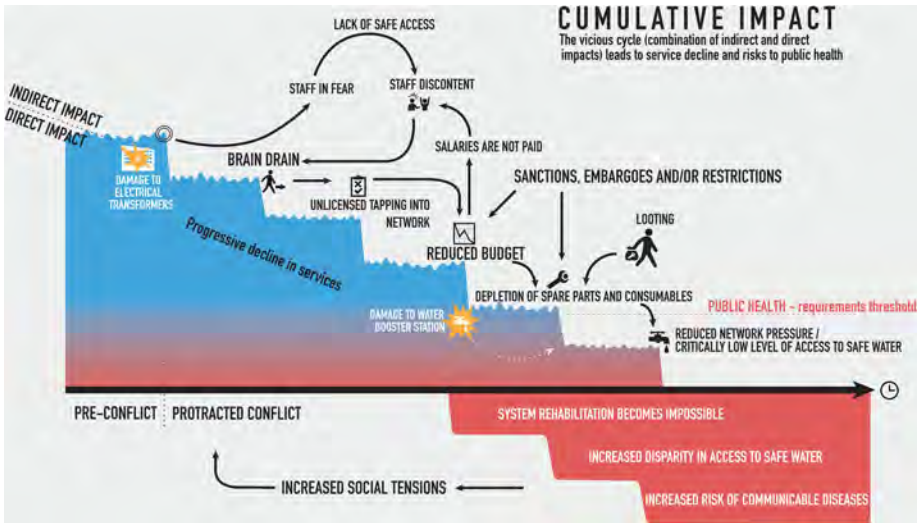
5   See ICRC, above note 1.

Figure 2. Showing cumulative impact on infrastructure of the conduct of hostilities, particularly over prolonged periods. This can create a vicious cycle of indirect and direct impacts leading to service decline.

depends upon. However, there are other critical assets that are also exposed to direct impacts during armed conflict that should be considered, for instance service provider offices and operation rooms, warehouses and stockyards, vehicles and heavy machinery. Even more importantly, formal service staff (and informal service providers) can suffer direct impacts as well. Expanding the response to effectively address direct impacts is not in itself sufficient. As humanitarian actors engaged in urban services interventions, our response needs to increasingly factor in indirect effects in protracted conflict settings. Indirect effects typically originate from socio-economic and security-related processes that reduce or even prevent proper operation and maintenance of critical infrastructure from routinely being carried out. In protracted crises this is often due to a multitude of factors. A number of these factors occurring at once can reduce the likelihood of stabilizing a service or services, not to mention preventative maintenance from being carried out and/or adequate emergency preparedness measures from being taken.

Over prolonged periods direct and indirect impacts take a cumulative toll on systems or infrastructure, which is not easily addressed through conventional humanitarian responses – and so requires a more proactive component, involving prior preparation and planning, in lock and step with the conventional rapid reactive interventions. Avoiding cycles where service decline becomes inevitable is often beyond the limits of humanitarian assistance, due to constraints in programming, funding and internal technical or logistical capacity. Yet humanitarian interventions are nonetheless already being adapted under current constraints to attempt to better meet needs in urban areas. For instance, support to service providers has moved beyond an emergency water supply response

(water trucking, bladders, tap stands, and so on) to include rehabilitation of critical infrastructure as well as the provision of spare parts and consumables necessary to help maintain or stabilize a service or services. This type of support is logistically heavy, but absolutely essential for sustaining services. For example, in 2015 the ICRC continued to work closely with the water boards and the Syrian Arab Red Crescent (SARC) to not only repair damaged water supply infrastructure, but to also maintain the broader water supply system for the benefit of 16 million people in Syria. This effort requires a continuous logistics chain to ensure that spare parts and consumables are regularly provided to the water boards in order to help mitigate an interruption to the provision of water. To give an idea of the scale, over the course of 2015 this included 592 tons of disinfection materials, 5000 litres of hydrochloric acid and 12,600 tons of filtration sand for water treatment plants alone.[6]

What are the main constraints in being able to shift from a conventional response to a more effective and proactive response?

If a service deteriorates beyond a certain point, conventional interventions will not prevent a slide into a condition that is too difficult or costly to reverse. The classic humanitarian response is often too focused on immediate needs to incorporate such medium- or long-term considerations. As previously mentioned, avoiding such cycles is often beyond the limits of humanitarian assistance under the current model, hence conventional response does not provide the means necessary to overcome the challenges in an already complex urban situation. The current operational modalities heavily favour:

1. Responses that are constrained to direct impacts, rather than being more inclusive to include indirect impacts and hence mitigating the likelihood of cumulative impacts; and
2. Emergency response as a reactive function rather than proactive preparedness measures being taken that would contribute to risk reduction and ultimately enhance resilience.

In addition, the lack of respect for the legal protection afforded to civilian objects under IHL continues to manifest itself and as a result assistance continues to focus on rehabilitating or even replacing critical infrastructure that has been damaged, sometimes time and time again.

In light of the constraints, how can the approach and hence the response best be improved?

If effective change is to come about, humanitarian operational approaches in urban areas caught up in protracted conflict must address a number of relevant issues, including the large spatial and time scale of the challenge; the multifaceted interdependencies of essential services; the cumulative effects of direct and

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6   ICRC, "Our Work in Syria: Facts and Figures 2015", available at: https://www.icrc.org/en/download/file/18634/syria-war-icrc-action-2015.pdf.

indirect impacts; the challenges faced as a result of a lack of respect for the rules of IHL; the need to rethink the relief-rehabilitation-development spectrum; and funding that does not match the duration or scale of the needs. In specific regard to more flexible funding mechanisms, this requires a shift in our approach to multi-year programming, which from experience is not only based on adapting the length of current planning periods, but also the necessity to more robustly engage in relationships with local actors and the local population, as well as further developing our technical capacity and competences.

It is much easier to recommend these changes than to make them, as they imply a sector-wide shift in paradigm. The traditional paradigm that sees response efforts as separated into successive phases of relief, rehabilitation and development is particularly constraining when it comes to protracted armed conflicts that play out in urban areas. This paradigm constricts planning by limiting our thinking to stand-alone technical relief-type interventions, and precludes any integration of relief expertise and programming with improved emergency preparedness and response (for instance, disaster risk reduction measures) or activities previously perceived as "development", such as the rehabilitation of infrastructure and the provision of spare parts and consumables to service providers. Many humanitarian organizations do not even have engineers on staff, and even if they do these engineers are typically working on more classical emergency response in informal settlements and camps for refugees and internally displaced persons. These humanitarian organizations do not feel as comfortable engaging in urban areas with services, regardless of whether it is in a context of conflict, for example in Syria, or in neighboring countries affected by an influx of refugees, for example Lebanon and Jordan. In many protracted urban conflicts, such technical interventions are seen by some as the first steps in bridging the artificial fissure between contexts of conflict and development, although they can still fall quite short of addressing the most pressing needs.

We thus encourage greater discussion around calls for change from many different perspectives, including other humanitarian organizations, donors, development agencies and academics, as well as civil society and other stakeholders. We also encourage efforts to clear the obstacles that have prevented more effective programming for too long. Inevitably, the path to a better approach requires further discussion both within and beyond the humanitarian sector. We may start along that path by making efforts to link relief, rehabilitation and transitional development assistance, but the ideas must be taken further, and converted into action.

The next steps for local and international implementing agencies are clear. Firstly, multi-year planning and programming is needed to address the severity and complexity of the challenge. Secondly, reporting structures should be modified to enable collection not only of evidence of direct impact but of indirect and cumulative impacts as well. Thirdly, agencies' evaluations should include assessments of how well their programming supports local coping mechanisms, which, as the 2015 report on Urban Services During Protracted Armed Conflict

explains in detail,[7] can be invaluable for some but dangerous to others. Finally, we as humanitarians must improve our logistical and technical capacity to be better able to adapt our response to more effectively meet the scale of the urban service needs. Concerning the development of the skills and competences necessary to tackle the urban infrastructural challenges both energy supply and wastewater treatment remain priorities for capacity development. This is context dependent. In Syria, for instance, the context demanded that the ICRC hire electric engineers; whereas in Gaza the ICRC has hired both wastewater and electric engineers (see Boxes 1 and 2).

Donors should ensure that funding modalities match the scale and duration of the challenge. Although this may seem more costly on the surface, interventions will be much more expensive and take far longer if aid agencies and local service providers are unable to prevent or mitigate the consequences of cumulative impacts. This is particularly crucial because prolonged exposure to degraded urban services poses a serious risk to public health (see Figure 3).

The ICRC considers this approach to be central in securing "development holds" against the reversals in development caused by protracted conflict and hence providing financial savings as it avoids much greater costs that would otherwise be incurred after the conflict was ended. The ICRC also understands clearly the challenges posed by the shrinking humanitarian space as a result of the lack of respect for IHL that is seen in many of today's armed conflicts. Operationally speaking, this has meant that we have had to strengthen our remote management capabilities, without compromising humanitarian principles. A good example of where innovative approaches rather than simply technology has helped to provide broader humanitarian coverage is in Syria (see Box 1).

Recognizing that this will take time, how can we as humanitarians be better prepared for long-term emergencies in urban areas?

Better responses are best served by better preparation, as well. In parallel to "quick-fixes" to repair damage once it has occurred, effective humanitarian programming must develop more enhanced and integrated emergency preparedness mechanisms for urban areas. Strengthening relationships with local actors such as municipal water utilities, for example, and supporting them in adapting their operational policies and procedures to an emergency context is vital. Such efforts open up opportunities for scenario planning and the identification of priorities that incorporate the people, hardware and consumables so critical to any service. Designing support programmes that factor all three of these elements of service provision is inclusive of both "hard" (*ex post facto* rehabilitation and repair) and "soft" (long-term planning) sides of emergency preparedness and ultimately reduces risk. In addition, such interventions aim to strengthen the resilience of urban service systems to help them better withstand emergency situations, which requires a shift from reactive to proactive programming and hence a longer term outlook. The benefits of such an approach in emergency contexts not only

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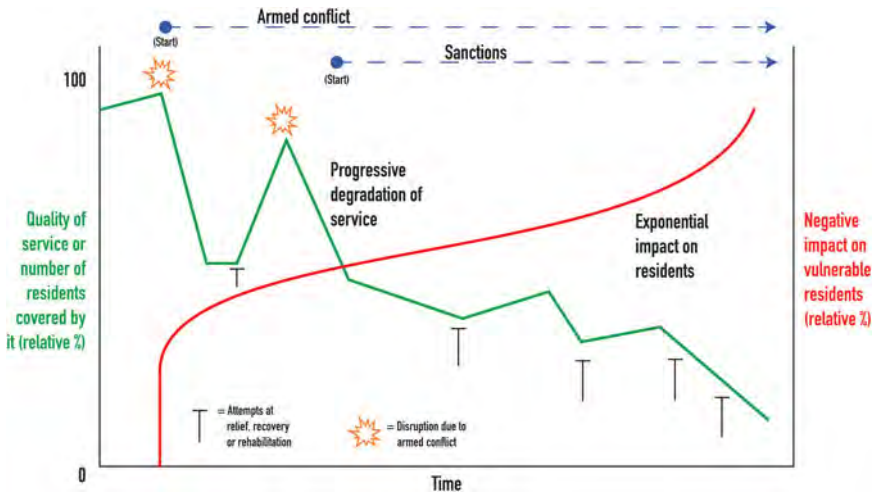7   ICRC, above note 1, pp. 25, 34 and 38.

Figure 3. Showing the deterioration in quality of essential services and consequent negative impact on residents of urban areas as a result of protracted armed conflict and/or sanctions.

reduces the vulnerability of service provision and therefore of the population served, but also enhances emergency preparedness. Ultimately, this works to mitigate the cumulative impact of protracted conflict on urban service provision and it is beneficial prior to, during and long after a crisis.

Emergency preparedness in protracted conflicts is a continuous process, but the basis of any plan must be agreed upon with all stakeholders from the beginning. The necessary human and financial resources need to be allocated in due proportions to the response as well as to the preparedness plans. This stretches both the capacity and means of all aid organizations, who struggle to do either one or the other effectively. On the soft side, a common practice for organizations engaged in longer term planning is that emergency response plans require coordination and communication mechanisms and procedures to be put in place ahead of time, and also that they be inclusive of all of relevant stakeholders. These mechanisms could be technical, administrative, financial, logistical, and so on.

The hard side of contingency planning, the actual engagement with rehabilitation and repair of infrastructure and equipment or the provision of spare parts and consumables includes pre-positioning of equipment, spare parts and consumables as well as dispatch stations that reduce response time and help to ensure access to any given location from multiple entry points. Any emergency preparedness plan, for example, should seek to identify alternative water or electricity sources as well as transportation routes for the delivery of humanitarian assistance, including spare parts and consumables. Putting emergency preparedness measures in place is best done through training exercises and drills in partnership with local institutions, where they exist, and should

Box 1: Case study

Syria: Strengthening remote management

Since the outbreak of conflict in Syria, the infrastructure that provides access to clean water has been subject to damage from the fighting as well as the gradual deterioration of water delivery systems due to inadequate operation and maintenance. Service providers who aim to restore or simply stabilize water supply face huge challenges in being able to carry out repairs and rehabilitation, accessing spare parts and consumables, and in retaining skilled staff with the knowledge of these systems as well as ensuring safe access to sites. As a result, access to clean water in a country where some seven million people have been internally displaced in large part to urban areas has declined and in some areas is worryingly low. The ICRC began working early on to respond to this critical need.

As Syria is a country that has always had a strong skilled work force, notably of engineers, the ICRC sought to draw on local capacity to help meet needs in the most sustainable way. It has done this by providing training on water, sanitation and hygiene in emergencies to the volunteers of the Syrian Arab Red Crescent (SARC) as well as supporting them in hiring Syrian engineers, which work as front-line responders as well as with more structured assistance support across the country. As a result, the SARC has been able to develop its own response capacity for water and habitat assistance in emergencies, and the ICRC continues to provide resources to sustain and develop the new team and its programmes.

Through its work with the SARC, the ICRC now provides support to each major municipal water board in the country. Building the capacity of the SARC has helped the ICRC to overcome current challenges of remote management in some areas where its own access is restricted, as well as contributing to the SARC's capacity to better serve local communities in the future. Finally, the support to the water boards and to the SARC, is a long-term investment, since both the people and the structures will be critical during the post-conflict recovery process and beyond.

Since 2011, at which time the SARC had no water and sanitation department, the ICRC has supported the development of a team of approximately 270 SARC engineers and specialized volunteers. Specific trainings were initiated in 2013, and currently a program of twelve module-based trainings take place on an annual basis for the SARC water and sanitation (watsan) team. This covers basic response and principles, technical topics and managerial good practices. In addition to this training, an ICRC team of thirty-five engineers works in constant and close partnership with the SARC watsan volunteers. While the ICRC does not have safe access to all of the areas in Syria, the SARC watsan volunteers are now present in all fourteen governorates and in most SARC sub-branches. Similar training programmes are being prepared for the technical staff of service providers, to cope with loss of capacity.

serve to enhance response performance in the event of an emergency based on specific scenarios identified beforehand.

How is the ICRC in particular preparing to better respond to needs in urban armed conflict?

In light of the skills and planning capabilities required to stabilize and adequately maintain essential services, the ICRC must invest in developing the technical and planning competencies of its staff. As it stands in the humanitarian sector, capacity development is heavily weighted to municipal water supply, while skills in wastewater services (collection and treatment) and electricity supply have yet

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Box 2: Case Study

Gaza: Partnerships with service providers

The ICRC began supporting the water sector in Gaza in 2006 by providing technical, operational and financial support for the Coastal Municipalities Water Utility (CMWU). The Gaza Strip was plagued by regular power outages, partly due to damage to the only power plant in Gaza in June 2006. A sewage lagoon, or effluent pond, collapsed in Beit Lahia in March 2007, causing the death of four people in a vulnerable downstream community. The limited number of humanitarian actors made the ICRC's activities particularly important.

The ICRC prioritized its support for the rehabilitation and upgrading of essential infrastructure, as well as the urgent need to ensure wastewater treatment to secure the groundwater on which Gaza residents rely for domestic and agricultural supply. This involved the construction of interim wastewater treatment plants in Rafah, Khan Younis, and Wadi Gaza. Support to the CMWU was later expanded to strengthen municipal emergency preparedness, which proved essential in the response to the hostilities in 2008/2009 and 2012.

Since 2013, the main donors to the water sector in Gaza have resumed their investments in larger infrastructure. But the CMWU and municipal water departments still struggle to ensure adequate operation and maintenance (including the supply of spare parts and consumables), as well as the capital costs of smaller infrastructure works that need to be performed. The difficult operating environment due to the occupation, entry restrictions for materials, and internal political divisions has made service providers for water, wastewater and electricity financially unsustainable. Today, the ICRC supports the CMWU via the rehabilitation of infrastructure and provision of spare parts and consumables to enable more reliable operations and maintenance. The ICRC has also covered part of its operating costs.

During the 2014 conflict, the ICRC – in its role as neutral intermediary – was the sole actor coordinating water, wastewater and electricity provision between

the parties to the conflict, who needed safe access to perform repairs and basic operation and maintenance on critical infrastructure. The ICRC also supported a short-term emergency response that included water-trucking and generators for a back-up power supply, while simultaneously rehabilitating damaged infrastructure.

This support helped stabilize essential service provision for the population of Gaza and specialist services like hospitals. After the 2014 conflict, the ICRC helped rehabilitate infrastructure. As a wider network of humanitarian actors has re-engaged, the ICRC has refocused its efforts on strengthening the emergency preparedness and response capability of service providers, thereby playing a complementary role to donor investment.

to be fully realized. The multidisciplinary skill sets needed on the ground (including water supply engineers, wastewater engineers, electrical engineers, mechanical engineers, environmental engineers, architects, hydrologists, hydrogeologists, and so on) also need to be reflected in the roster of humanitarian staff ready to be deployed.

The unprecedented humanitarian needs seen today have emerged from numerous armed conflicts spanning long periods of time, overstretching the ability of the humanitarian sector to respond. It is therefore the ICRC's duty to develop the skills necessary to effectively respond in urban areas, but it is also necessary to more effectively communicate and coordinate our response with other local and international actors in order to ensure a broader coverage of the needs, while mitigating the chance of duplication, and when relevant to engage in partnership with development actors. As part of these efforts the ICRC will be more assertive in mobilizing other relevant international and local organizations (when and where possible) to provide complementary assistance.

The course ahead must ultimately lead to programming that pre-empts the vicious cycle of cumulative impact of protracted armed conflict on essential urban services, enabling local and international humanitarian and development actors to maintain or at least stabilize urban services during protracted armed conflict. Dominant rural-urban or relief-development distinctions must be left behind. Instead, we must move towards multi-year integrated programming that is supported by funding models that are more fit-for-purpose, and improved protection of civilian objects as a function of greater respect for IHL. If we are to be of use to the millions affected by prolonged urban armed conflicts, let us embark on that course now. The ICRC is committed to developing further its own competencies to be able to respond to the urban challenge while adapting its approach to more effectively meet the needs in urban contexts, while making all efforts to promote greater respect for IHL.

Addressing urban crises: Bridging the humanitarian–development divide

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Abstract

The world is urbanizing rapidly. Demographic shifts are intersecting with the impacts of climate change, conflict and displacement. In many parts of the world, chronic stresses mean that large proportions of the urban population are already vulnerable. Rapid and poorly planned urbanization is not just an issue for governments and development specialists; humanitarian actors must also increase their understanding of and ability to operate within towns and cities at risk of crises. Their current approaches do not always adequately reflect and work with the reality of urban populations and the systems that support urban life. This means that humanitarian interventions may not contribute to sustainable urban development and the well-being of town and city dwellers in the longer term. This article argues that greater collaboration between humanitarian responders, municipal actors, development specialists and professional associations could lead to better outcomes for crisis-affected populations in both the short and long term.

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Background

The past decade has seen a gradual shift in policy thinking on the intersection between urbanization, sustainable development and humanitarian action. The implications of an increasingly urban world population, combined with climate change and the growth of poorly planned and built urban settlements, are beginning to dawn: humanitarians find themselves operating in urban areas more frequently, but their tools and approaches were largely designed with rural regions affected by floods or droughts, and refugee movements across remote borders, in mind. The characteristics of rapid urbanization – the poverty, vulnerability and everyday shocks and chronic stresses that accompany it in many parts of the world – intersect with a range of different emergency situations: conflict, violence, displacement, floods, earthquakes and other "natural" hazards, technological disasters and pandemics.[1] A move towards sustainable urban development and better enforcement of building and zoning codes in at-risk urban areas could greatly reduce death and destruction caused by natural hazards and the impacts of climate change. However, the pace of urbanization and the prohibitive cost of retrofitting existing buildings and infrastructure to an adequate standard in some of the world's poorest countries mean that humanitarian actors will inevitably be called upon to respond to more urban crises in future. But there is considerable scope for improvement in the way that humanitarians respond to such crises, and much that they can learn from other actors actively involved in promoting sustainable urban development.

The evolution of the policy framework for response in cities has been prompted by a number of crises affecting urban areas, during and after which humanitarian responders have questioned their own approaches: the effects of the 2010 Haitian earthquake on Port-au-Prince, the response to Typhoon Haiyan in Tacloban in 2013, the 2014 Ebola outbreak in Freetown and Monrovia.[2] These debates have also been informed by the ongoing and very visible indirect impact of conflict on towns and cities, particularly in the countries surrounding Syria, where unprecedented numbers of refugees have sought sanctuary. The challenge of responding to massive influxes of refugees into urban areas of Jordan and Lebanon has been central to these discussions. The urban characteristics of this cross-border displacement are well documented.[3]

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1   See for example, Marion Harroff-Tavel, "Violence and Humanitarian Action in Urban Areas: New Challenges, New Approaches", *International Review of the Red Cross*, Vol. 92, No. 878, 2010, available at: www.icrc.org/eng/resources/documents/article/review/review-878-p329.htm (all internet references were accessed in September 2016).

2   See, for example, Victoria Maynard, *Experiences Following Typhoon Haiyan: Humanitarian Response to Urban Crises*, DFID, London, 2015; Donald Brown *et al.*, *Urban Crises and Humanitarian Responses: A Literature Review*, University College London, 2015; International Housing Coalition, *Haiti Shelter Sector Assessment: One Year After the Earthquake*, Washington, DC, 2011.

3   For a general discussion and a range of articles on the topic of urban refugees and internally displaced persons, see "Adapting to Urban Displacement", thematic issue, *Forced Migration Review*, No. 34, February 2010.

A conference organized by the Active Learning Network for Accountability and Performance in Humanitarian Action (ALNAP) in January 2012, entitled "Meeting the Urban Challenge: Adapting Humanitarian Response to a Changing World", drew the attention of the sector to its own shortcomings, as did the accompanying background paper for the event, creatively titled "'We're Not in the Field Anymore'".[4] It noted a failure of international agencies to "co-evolve" with urbanization, and a continued and serious lack of strategic and operational adaptation.[5] The need to move from a discussion of the complexities and challenges of operating in urban areas to changing policies and operations on the ground led the UK's Department for International Development (DFID), the International Rescue Committee (IRC) and the International Institute for Environment and Development (IIED) to initiate a collaboration on "urban crises" in 2014.[6] This partnership is based on the recognition that while appropriate responses will differ according to the type of crisis – conflict-related, displacement, "natural" or technological disasters – there is sufficient overlap in the changes needed in mindset and ways of working that render the focus on "urban crises" meaningful.

This article will set out the argument for why a change in approach in humanitarian response is needed, taking into account the challenges that these actors have experienced in recent urban crises, including the Haiti earthquake, Typhoon Haiyan in the Philippines and the ongoing Syrian refugee crises. It ends by setting out some of the thematic areas where opportunities can be found for greater interaction and collaboration between humanitarian, development and urban actors responding to crisis-affected populations in urban areas.

Why the need for a new approach?

The world urban population is estimated to increase from 3.5 billion today to 6.2 billion in 2050, with most of the population growth concentrated in small to medium-sized settlements in Africa and Asia.[7] Of particular concern is the fact that the past forty years have witnessed a 326% increase in the urban populations of lower-income and fragile States.[8] The displaced are increasingly part of this global urban population, with over half of the world's internally displaced

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4   Ben Ramalingam, "'We're Not in the Field Anymore': Adapting Humanitarian Efforts to an Urban World", ALNAP, London, 2011.
5   *Ibid.*, p. 23.
6   For more information on DFID's urban crises programme, see the websites of its two main implementing partners, available at: www.rescue-uk.org/what-we-do/urban-crisis and www.iied.org/urban-crises-learning-fund.
7   United Nations Department of Economic and Social Affairs, *World Urbanization Prospects: The 2014 Revision, Highlights*, New York, 2014, available at: http://esa.un.org/unpd/wup/Highlights/WUP2014-Highlights.pdf.
8   Internal Displacement Monitoring Centre (IDMC), *Global Estimates 2014: People Displaced by Disasters*, Geneva, 2014, available at: www.internal-displacement.org/publications/2014/globalestimates-2014-peopledisplaced-by-disasters.

persons (IDPs) and refugees (estimated as a total population of about 65.3 million[9]) residing in towns and cities.[10] Urban areas are now the backdrop for all sorts of crises. Many of these environments already have systemic obstacles to the equitable provision of basic services, security and welfare, even before an emergency.

Estimates from 2014 suggest that more than 880 million people live in informal urban settlements (sometimes referred to as slums), accounting for 29.7% of the urban population living in developing countries.[11] These residents often live with high levels of vulnerability, as the land they live on is exposed to hazards and they do not have the protective infrastructure, decent housing and access to basic services that could keep them safe. The very fact that these areas are informally occupied – and often informally governed – makes it difficult (or politically unpalatable) to reduce their exposure to natural and man-made hazards. They thus continue to accumulate acute and structural vulnerabilities and are frequently adversely affected by a range of shocks and stresses. Even small shocks can easily engender a humanitarian crisis.

These are also the areas where displaced people are most likely to settle. Residents in these areas may not have secure tenure, and when homes are destroyed, or people are forced to move, those who cannot prove their rights to land or housing can be severely disadvantaged. Even in wealthier areas of towns and cities in the developing world, poor urban planning and lax enforcement of planning legislation and building codes puts populations at risk.

Violence and conflict occur frequently in cities, as they are the locus of, on the one hand, political and economic power and assets, and on the other, social tensions and inequalities.[12] Urban warfare has been a constant feature of recent conflicts, complicating humanitarian operations, in particular in terms of access and protection. For example, in the Syrian conflict, the use of explosive weapons with wide area affects in urban areas has inflicted indiscriminate and devastating impacts in heavily populated areas. The besieging of towns and cities by parties to the conflict has further prevented the delivery of life-saving assistance to Syrian urban populations. Urban violence in contexts other than war is also leading to high levels of mortality in certain regions, and again compromises the ability of humanitarian actors to reach populations in need of assistance. For example, gang violence in the larger cities of Brazil has become so severe that international humanitarian actors, including the International Committee of the Red Cross, have developed programmes to promote safer access to schools and health-care facilities.[13] Many humanitarian actors responding to the 2010 earthquake in the Haitian capital, Port-au-Prince, were ill-prepared or unwilling

9   See: www.unhcr.org/uk/figures-at-a-glance.html.
10 IDMC, *Global Overview 2015: People Internally Displaced by Conflict and Violence*, Geneva, 2015; Nicholas Crawford, John Cosgrave, Simone Haysom and Nadine Walicki, *Protracted Displacement: Uncertain Paths to Self-Reliance in Exile*, Overseas Development Institute, London, 2015.
11 United Nations Human Settlements Programme (UN-Habitat), *World Cities Report 2016*, Nairobi, 2016.
12 See "Conflict and Violence in 21st Century Cities", special issue, *Environment and Urbanization*, Vol. 26, No. 2, 2014.
13 For a discussion on this, see: www.icrc.org/en/document/brazil-partnerships-reduce-impact-violence-rio-de-janeiro.

to deliver assistance in certain neighbourhoods with very high levels of violence prior to the disaster.[14]

As noted above, recent crises have highlighted the consequences of urbanization for humanitarian assistance and the inadequacy of traditional response. However, the concentration of people, industries and resources, the existence of infrastructure and market systems, and the presence (albeit often weak) of institutions of various types presents an opportunity for humanitarian action to contribute to the longer-term development of inclusive, safe, resilient and sustainable urban centres.

There is a pressing need to reshape humanitarian action so that it harnesses the resources and opportunities already present in urban areas and works to support, restore and improve existing urban systems after a crisis. While complex, the urban environment presents humanitarian and development actors with the opportunity to operate at scale, and in a cost-effective way, but only if they work with the ingenuity and perseverance of urban populations and grasp the way that urban systems were functioning prior to the crisis. Key to this is an appreciation of existing social and human capital in towns and cities, and the opportunities provided by local governance institutions, markets and the private sector to support relief and recovery. Also important is recognition of the fact that displaced populations can be self-reliant and contribute to the local economy, and that humanitarian response can benefit from the expertise of urban development actors and existing development programming.

Challenges to responding effectively in urban areas

At present humanitarian response is not well aligned with the way that towns and cities are managed locally, and how urban life plays out. This puts a limit on how effective humanitarian response to a crisis in a densely populated area can be. Da Silva, Kernaghan and Luque, in a paper exploring the challenges of urban climate change, point out that urban areas must be understood through a consideration of the range of different systems of which they are composed, not just their individual parts.[15] These systems include governance, infrastructure, markets and social systems, among others, and to take them all in to account requires a more holistic and spatial approach in which urban areas are understood as "complex 'living' systems".[16] The interconnectedness of these systems is one defining characteristic of urban areas, as is the density and heterogeneity of urban neighbourhoods, and the presence and proximity of different governance actors.[17]

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14 Matthew Bolton, *Human Security after State Collapse: Global Governance in Post-Earthquake Haiti*, LSE Global Governance Research Paper RP 01/20112011, London, 2011.
15 Jo Da Silva, Sam Kernaghan and Andrés Luque, "A Systems Approach to Meeting the Challenges of Urban Climate Change", *International Journal of Urban Sustainable Development*, Vol. 4, No. 2, 2012.
16 *Ibid.*
17 For a definition of "urbanism", see: www.lse.ac.uk/internationalDevelopment/research/crisisStates/download/publicity/CitiesBrochure.pdf.

Informal and formal systems coexist in cities, and the intersection of the formal and informal, and the different scales at which urban residents interact – household, neighbourhood, city – also contribute to the specificity of urban life and livelihoods.

There has been a discernible shift in the policies, programming and operational tools of many humanitarian agencies that are responding in urban contexts. For example, the United Nations High Commissioner for Refugees (UNHCR) released an urban refugees policy in 2009, and other institutions within the United Nations (UN) will be releasing strategies and policies for their programming in urban areas in 2017, spurred on by the UN's Conference on Housing and Sustainable Urban Development, Habitat III, in October 2016. More critical is that these policies and statements of intent are put into practice, to ensure humanitarian interventions in urban areas fully harness the potential of cities and their inhabitants. The current approach to assistance is often siloed within sectors, and bound by short timeframes, post-crisis, that lead to a disregard for the urban past and not a great deal of preoccupation with its future. Traditionally humanitarians tend to analyze needs and capacities at the household or individual level. This means their response may not take into account the ways that households engage with the fabric of the city and access services through either formal or informal networks and systems. While there have been advances in how coordination is managed, the current cluster system still struggles to institutionalize working with local market mechanisms, supporting local authorities or restoring/bolstering existing service delivery mechanisms. Opportunities are lost for wider and longer-lasting positive impact on urban life. In the worst cases, humanitarian interventions may distort and damage informal or formal economies and service provision, particularly if these involve the establishment of parallel systems for distributing goods and providing services.

For example, a traditional humanitarian response (i.e., with material and logistical assistance based primarily on direct service provision to affected people, and the construction of camps within or near to urban areas) can have knock-on negative impacts on urban planning and the functioning of local markets for food, water and energy. By contrast, cash-transfer programming and the demand for goods and services from affected populations may serve to stimulate urban markets.[18] (Cash programming will inevitably be more difficult in towns and cities directly impacted by conflict and where supply chains and markets are no longer functioning adequately.) Traditional approaches may generate dependency and fail to tap into the potential of urban refugees and IDPs who bring many assets, skills and resources to their host cities which can expand and diversify existing markets.[19] This is a particular lost opportunity for women, who can earn

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18 Christian Lehman and Daniel Masterson, *Emergency Economies: The Impact of Cash Assistance in Lebanon*, IRC, London, 2014.
19 Karen Jacobsen, "Refugees and Asylum Seekers in Urban Areas: A Livelihoods Perspective", *Journal of Refugee Studies*, Vol. 19, No. 3, 2006; Alexander Betts, Louise Bloom, Josiah Kaplan and Naohiko Omata, *Refugee Economies: Rethinking Popular Assumptions*, Refugee Studies Centre, Oxford, 2014.

income and increase their financial independence in urban areas[20] (although cultural attitudes amongst some displaced groups and fears of harassment and gender-based violence may also prevent women from accessing work outside the home). Encouragingly, over the course of 2016, a number of refugee-hosting countries have announced their intention to provide greater access to livelihood opportunities for displaced people, with support from international donors.

Traditional responses to displacement, whether caused by a disaster or conflict, are also often centred on accommodating populations in camps. Today, however, despite popular perceptions, only a minority of refugees and IDPs are housed in camps. In the Middle East, for example, most refugees from Syria are living in rented accommodation, unfinished buildings, or makeshift shacks within or on the outskirts of urban centres. But images of displaced populations living in rows of tents are still widely distributed in the media, disproportionate amounts of funding are channelled towards camp-based responses, and politicians and celebrities continue to have photo calls in places like Dadaab or Zatari. So dominant is this paradigm that some actors (notably the UNHCR) use the labels "camp" and "non-camp" for displaced populations, thus classifying the majority with reference to a minority and with one fell swoop erasing the critical distinctions in capacities, needs, access to services and protection concerns between displaced people living in urban environments and those in rural areas.

Humanitarian actors struggle to deal with the complexity of towns and cities and to take full advantage of the capabilities and resources present in urban areas. Acknowledging this lack of capacity and the general dearth of evidence on how best to assess need, target interventions, communicate with affected populations and assess outcomes is an important first step. While there is no magic bullet, the knowledge and expertise of urban development actors, and of the formal and informal institutions they operate within, should more routinely inform humanitarian action. The exclusion of development perspectives in immediate humanitarian response can impede long-term recovery. While humanitarian actors cannot solve structural urban problems, they can operate in ways that better support city systems and establish new frameworks within which future urban development can flourish, while limiting disruption to urban development trajectories. It should be stressed here that the imperative to save lives can be aligned with the fast-tracking of recovery and strengthening of resilience.

Opportunities to bridge the humanitarian-development divide

The World Humanitarian Summit in May 2016 saw the launch of the Global Alliance for Urban Crises, a platform designed to bridge the divide between

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20 Victoria Metcalfe and Simone Haysom, with Ellen Martin, *Sanctuary in the City: Urban Displacement in Kabul*, Humanitarian Policy Group, Overseas Development Institute, London, 2012.

humanitarian responders and a range of actors with urban expertise, including networks of local authorities, professional associations of planners, architects and engineers, and development actors.[21] With more than seventy organizations as members, the Alliance is involved in a range of activities that will support and promote more appropriate humanitarian action in towns and cities affected by crisis. Above all, Alliance members will seek to make the most of the opportunities that towns and cities provide, and to find different, more appropriate ways of working that support both crisis-affected populations and their urban environments, helping them to return to normality as soon as possible. The Alliance is premised on the idea that bringing together the two constituencies of urbanists and humanitarians will engender collaborations which meet both short-term humanitarian and longer-term development needs of urban populations and their environments. The Alliance is just one example of an initiative that seeks to "bridge the humanitarian-development divide" – there is scope for much more. The following paragraphs outline some of the recommendations developed by members of the Alliance, which they are now putting in to practice. These could serve to guide innovation and intervention by other actors and networks.

One key area that can help bridge the humanitarian development divide is greater engagement with municipal authorities.[22] Moving beyond simply informing local governance actors of their plans, and getting consent, responders to humanitarian crises should, where possible, be striving to find more substantive ways to engage. This will vary depending on local circumstances – including capacity, financial probity and ability to work with external actors – but even in the most difficult of circumstances, including cities in conflict, this engagement is critical. Humanitarian agencies should be making the most of local knowledge held within these institutions – of populations, existing services and infrastructure – and working with authorities to communicate with urban residents, ensuring clarity on eligibility and mitigating social tensions while also taking future development needs and aspirations into account. As mayors often point out, they are the closest interface between urban populations and the State, and are generally the first port of call for residents in difficulty. Efforts to coordinate and collaborate with municipal authorities should also seek to build local capacity for disaster risk reduction, preparedness and crisis response, generating longer-term returns from short-term emergency interventions. Attempts to this end were made in the response to Typhoon Haiyan, with the municipality of Tacloban.[23]

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21 See: www.urbancrises.org.
22 Mercy Corps has made collaboration with municipality authorities in Lebanon a central part of its approach to the Syrian refugee crises; for a range of materials related to this issue, see: www.mercycorps.org/research-resources/role-municipalities-syria-refugee-crisis. The World Bank and other donors are also providing additional support to municipalities in Jordan where municipal services are under strain as a result of large influxes of Syrian refugees. Background documents can be accessed at: http://documents.worldbank.org/curated/en/532171468273353365/Jordan-Emergency-Services-and-Social-Resilience-Project.
23 See V. Maynard, above note 2, for a discussion on this.

Related to the above, "area"- or "settlement"-based approaches can render humanitarian interventions more legible to local actors and institutions, and find ways to ensure their buy-in and cooperation. These approaches take a specific geographical area (a municipality or neighbourhood, for example) as the primary reference for planning and delivering assistance, and focus on providing a range of different types of support to the whole population of the area. This is in contrast to approaches to the delivery of humanitarian assistance based on particular population groups (such as displaced people) or that provide just one type of assistance (such as shelter, or water and sanitation). While there is still debate on the precise definition of area-based approaches and very little evaluative material on how they have operated in practice, the fact that these are generally multi-sector, and as such take into account the range of needs an individual or family living in an urban area will have, means they are more likely than other types of interventions to reflect how towns and cities were managed before a crisis.[24] They can help alter the scale of interventions, complementing the traditional humanitarian focus on the affected individual or family with a broader lens that considers how those individuals can get the goods and services they need from existing urban systems, and ensuring that interventions in one geographical area do not obstruct or hinder work elsewhere. An area-based approach can also go some way to mitigating the problem of who is affected, critical in circumstances of chronic poverty amongst populations hosting displaced people, or a large event, such as an earthquake, that impacts an entire city. It can also help to avoid social tensions when one group, for example refugees, is provided with assistance while others with similar needs are not targeted. This type of tension has arisen as a result of the support received by Syrian refugees living in impoverished urban areas of Jordan and Lebanon.[25] A geographical approach to assessment, targeting and programming will have implications for the coordination of humanitarian assistance, which is generally managed along sectoral lines. The way that agencies are encouraged to work together in sectoral "clusters" (e.g. coordination amongst all actors providing shelter assistance) prevents a more holistic view of the needs of urban populations and their surroundings, and runs contrary to the intersectoral way in which towns and cities are generally managed.

One additional way in which the humanitarian–development divide could be bridged is by ensuring that the right type of urban expertise is available to municipal and national authorities, humanitarian agencies and UN country teams. The types of skills and experience needed to, for example, improve or repair municipal water systems are not often found in humanitarian agencies, or on the rosters of experts that can be deployed in emergencies, as a review of the

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24 Elizabeth Parker and Victoria Maynard, *Humanitarian Response to Urban Crises: A Review of Area-Based Approaches*, Human Settlements working paper, IIED, London, 2015.
25 See Emily Sloane, *The Impact of Oxfam's Cash Distributions on Syrian Refugees Households in Host Communities and Informal Settlements in Jordan*, Oxfam, Oxford, 2014; Silvia Hidalgo *et al.*, *Beyond Humanitarian Assistance: UNHCR and the Response to Syrian Refugees in Lebanon and Jordan*, Independent Programme Evaluation, TRANSTEC, Brussels, 2015.

water, sanitation and hygiene (WASH) sector has shown.[26] Deployment of people with skills who are able to work on urban water systems, for example, and of urban planners, architects and engineers, could also help inform emergency response with a longer-term, more developmental approach that ensures temporary interventions do not have long-term negative consequences for the urban fabric and its economies, infrastructure and societies.

Conclusion

Discussions on the world's "urban future" are gaining ground, not least in view of the UN's Habitat III conference, which was held in Quito in October 2016. The outcome document of the conference, *The New Urban Agenda*, references the need to support crisis-affected people in ways that also contribute to sustainable urban development. Other references to humanitarian issues – notably urban resilience and disaster preparedness – in what is primarily a document focused on urban development, would suggest that the international policy arena is gradually becoming more open to dialogue across the development and humanitarian spheres on the issue of urban crises. The establishment of the Global Alliance for Urban Crises, and related commitments made by its broad range of members, should help to ensure that these very welcome changes in the policy environment translate to innovations in operations on the ground, and an overall move towards humanitarian response that is more appropriately tailored to the urban environment. Over the coming years, the Alliance will stimulate the right types of conversations and collaborations between diverse actors that share an interest in safe, sustainable and resilient cities, but there is scope for many other actors to become involved. Equally, humanitarian agencies must realize that our shared urban future will require them to fundamentally rethink how they operate in cities experiencing crises, including how they recruit and train their own staff, engage with local actors and deliver assistance to populations in need.

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26 Richard Luff, *Review of Humanitarian WASH Preparedness and Response in Urban Areas*, consultancy report prepared for UNICEF (mimeo), 2014.

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Minimizing civilian harm in populated areas: Lessons from examining ISAF and AMISOM policies

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Abstract

Both the African Union Mission in Somalia (AMISOM) and the International Security Assistance Force (ISAF) – the North Atlantic Treaty Organization's security assistance mission to Afghanistan – have recognized the importance of reducing civilian harm, and adopted policies and practices that restrict the use of certain weapons in populated areas. ISAF commanders issued a number of tactical directives that restricted the use of certain air-delivered weapons, and AMISOM developed an indirect fire policy limiting the use of artillery and other indirect fire munitions in populated areas. This article examines both ISAF and AMISOM policies and practices to reduce civilian harm in populated areas and explores how these policies strengthened adherence to international humanitarian law and illustrated new ways in which armed actors can take feasible precautions and prioritize civilian protection.

Keywords: ISAF, AMISOM, civilian harm, civilian casualty tracking, indirect fire.

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Introduction

Armed conflict is often fought in populated areas, where civilians are at heightened risk of death, injury and displacement. Such conflict zones pose operational challenges for armed actors, necessitating a shift in policies, training and tactics – both prior to and during conflict – in order to properly prevent excessive damage to civilians and civilian objects. Harm in populated areas can be caused by intentional targeting of civilians or civilian objects, or it can be incidental to an attack on a legitimate military objective. The danger is compounded when armed actors employ explosive weapons with wide-area effects, such as airdropped bombs, rockets, artillery and mortars, typically intended for open battlefields. Illustrative of this issue is empirical evidence from Afghanistan, Iraq, Libya, Somalia, Syria, Ukraine and Yemen, which reflects widespread death, injury, displacement, and damage to the essential infrastructure that civilians depend upon.[1] This article focuses on civilian harm in populated areas such as Afghanistan and Somalia, and efforts at mitigation.

Recent practices and policies of multinational forces have shown that, when civilian protection is prioritized as a key strategy, actors can take precautions to limit the impact of war and reduce civilian harm in populated areas. In Afghanistan, as the use of airpower was increasing, so was the civilian death toll. This forced NATO's International Security Assistance Force (ISAF) to issue a number of tactical directives[2] that restricted the use of certain air-delivered weapons in populated areas, even when such attacks could be lawful, and to train soldiers on civilian casualty avoidance and mitigation. The African Union Mission in Somalia (AMISOM) developed an indirect fire policy limiting the use of artillery and other indirect fire munitions in populated areas after concerns were raised that such weapons used in the city of Mogadishu caused civilian harm. Through the adoption of these policies, protecting civilians during operations and imposing limits on the use of certain weapons became a strategic priority and not just a concern about adhering to international humanitarian law (IHL). The results were seen in Afghanistan and Somalia, as both ISAF and AMISOM reduced the amount of civilian harm caused.[3] This article examines those policies and identifies additional measures that can be considered by parties to a conflict to minimize civilian harm in populated areas.

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1   Action on Armed Violence, *Explosive States: Monitoring Explosive Violence in 2014*, 2015, available at: https://aoav.org.uk/wp-content/uploads/2015/06/AOAV-Explosive-States-monitoring-explosive-violence-in-2014.pdf (all internet references were accessed in December 2016). For country and thematic reports relating to the use of explosive weapons in populated areas, see the International Network on Explosive Weapons website, available at: www.inew.org/learn-more-about-inew#inew-member-material.
2   Tactical directives were used to provide guidance and intent for the employment of force in support of ISAF operations.
3   In 2007, the United Nations Assistance Mission in Afghanistan (UNAMA) documented 629 deaths attributed to pro-government forces; in 2014, that number was 162. See discussion on UNAMA reports at notes 76–77, below.

A brief review of the legal regime

IHL, or the law of armed conflict, prescribes important rules for the protection of civilians. A commander must assess, based on information available to him/her before launching an attack, whether the means and methods used are indiscriminate or disproportionate, and whether all feasible precautions have been taken to minimize civilian harm. In 2011, the International Committee of the Red Cross (ICRC) stated that the use of explosive weapons with a wide impact area should be avoided in densely populated areas, due to the significant likelihood of indiscriminate effects.[4] The ICRC has broken "wide impact area" into three categories: due to large destructive radius of the munitions (e.g. large bombs or missiles or improvised explosive devices (IEDs)); due to the lack of accuracy of the delivery system (such as unguided indirect fire weapons, including artillery and mortars); and where a weapon system is designed to deliver munitions over a wide area (multi-launch rocket systems or cluster munitions).[5]

IHL does not *per se* prohibit the use of explosive weapons in populated areas, but a commander must consider legal obligations in assessing the means or methods of warfare when deployed in areas with a "concentration of civilians". This includes a "city, town, village or other areas containing a similar concentration of civilian or civilian objects"[6], and is synonymous with the terms "populated areas" or "densely populated areas." This section provides a brief overview of the legal regime as applied to the use of weapons in populated areas.

Prohibition of indiscriminate attacks

IHL prohibits indiscriminate attacks that are of a nature to strike military objectives and civilians or civilian objects without distinction. Article 51(4) of Additional Protocol I (AP I) specifies three types of indiscriminate attacks. First, attacks which are not directed at a specific military objective; this category depends not on the weapon used, but on the manner in which it is used. Second, attacks which employ a method or means of warfare which cannot be directed against a specific military objective; this prohibits the use of weapons that strike blindly, as well as weapons that are not precise enough to strike a specific military objective, due to the circumstances and manner in which they are used. Third, attacks which employ a method or means of warfare the effects of which cannot be limited as required by law; biological agents, for example.[7] In addition, Article 51

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4   ICRC, *International Humanitarian Law and the Challenges of Contemporary Armed Conflicts*, report submitted to the 31st International Conference of the Red Cross and Red Crescent, Geneva, Switzerland, 28 November–1 December 2011 (2011 Challenges Report).

5   *Ibid.*

6   Protocol Additional (I) to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts, 8 June 1977 (AP I); Jean-Marie Henckaerts and Louise Doswald-Beck (eds), *Customary International Humanitarian Law*, Vol. 1: *Rules*, Cambridge University Press, Cambridge, 2005 (ICRC Customary Law Study), Rule 13.

7   AP I, Art. 51.

(5)(a) of AP I prohibits area bombardment as a specific form of indiscriminate attack. Area bombardment is an attack which treats as a single military objective a number of clearly separated and distinct military objectives located in a populated area.

It should be noted while the use of weapons which are by their nature indiscriminate is prohibited in all circumstances, the prohibition against indiscriminate attacks extends to attacks that employ weapons which, in the circumstances ruling at the time and manner of their use, cannot be directed at a specific military objective or whose effects cannot be limited as required by IHL.[8] Put another way, use of particular weapons that violate the prohibition against indiscriminate attacks must be considered on a case-by-case basis, taking into account the type of weapon, the location of the attack, the military advantage expected to be gained from the attack, and the expected civilian casualties and damage to civilian objects resulting from the attack. The ICRC has noted that in the context of explosive weapons, a "circumstance that could make the use of a certain weapon indiscriminate is certainly its use in a densely populated area".[9]

Proportionality and precautionary measures to minimize civilian harm

The rule of proportionality prohibits attacks which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated.[10] An important point to emphasize is that the rule is not limited to death and injuries, but that damage to civilian objects should also not be excessive in relation to the military advantage anticipated.

The rule requires that, in the context of each attack, a prior assessment must be made as to the exposure to, and level of, injury or damage that civilians or infrastructure may suffer as a result of the attack, and to then weigh this against the military gain anticipated. This includes consideration of the target itself, its vicinity, and the type of weaponry used in the attack.[11] Thus, whether an attack is legal depends in part on whether the principle of proportionality was respected when the operation targeting the military objective was carried out.

Some experts note the growing recognition that "foreseeable" effects should also be factored into the proportionality assessment, including, notably, those from

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8   ICRC Customary Law Study, above note 6, Rule 71; Laurent Gisel, *The Use of Explosive Weapons in Densely Populated Areas and the Prohibition of Indiscriminate Attacks*, paper presented at the International Institute for Humanitarian Law's 37th Roundtable on Current Issues in International Humanitarian Law, "Conduct of Hostilities: The Practice, the Law and the Future", San Remo, 4–6 September 2014, available at: www.iihl.org/Media/Default/Round%20Tables/XXXVII%20Round%20Table/Speakers%20contributions/Gisel_REV.pdf.

9   2011 Challenges Report, above note 4, p. 41.

10 AP I, Art. 57(2)(a)(iii); ICRC Customary Law Study, above note 6, Rule 14.

11 Camilla Wasznik, *Protection of Civilians Under International Humanitarian Law: Trends and Challenges*, Norwegian Peacebuilding Resource Center, August 2011.

unexploded ordnance.[12] But there is a lack of consensus on the geographical and temporal scope of the proportionality assessment and of the attack itself.[13] Rather, proportionality tends to be evaluated on an operational level and is fact-specific. For instance, once the collateral damage expected from an attack cannot be minimized further through the choice of a different weapon or a change in the angle or time of attack, "the proportionality principle is considered fulfilled and a 'go' for the planned attack is likely".[14]

In addition to the rules governing legitimate targets of attack and methods of warfare, and proportionality assessment, the law mandates that parties take certain precautionary measures to protect civilians.[15] The principle of precaution has two aspects: precautions in attack and precautions against the effects of attacks.[16] In the conduct of military operations, "constant care" must be taken to spare the civilian population or civilian objects.[17] Particular precautions required by law include doing everything feasible to verify that targets are military objectives,[18] and taking all feasible precautions in the choice of means and methods of warfare with a view to *avoiding and in any event minimizing* incidental civilian casualties and damage to civilian objects.[19] The principle implies that commanders should choose the less harmful means available at the time of the attack to achieve their military aim.[20] It also requires that parties to the conflict cancel or suspend an attack if it becomes apparent that it will cause excessive "collateral damage".[21] Thus, precautions may entail such obligations as taking measures to gather all available information to verify the target and the potential incidental effects of an attack.[22]

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12 Timothy McCormack and Paramdeep Mtharu, *Expected Civilian Damage and the Proportionality Equation: International Humanitarian Law and Explosive Remnants of War*, Asia Pacific Centre for Military Law, University of Melbourne Law School, 2006, pp. 12–13. See also the 1996 Amended Protocol II to the Convention on Certain Conventional Weapons, Art. 3(10)(a), which requires that the "long-term effect of mines upon the local civilian population" be taken into account when taking precautions.

13 "The main problem with the principle of proportionality is not whether or not it exists but what it means and how it is to be applied." International Criminal Tribunal for the former Yugoslavia (ICTY), *Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign Against the Federal Republic of Yugoslavia*, 13 June 2000, para. 48, available at: www.icty.org/en/press/final-report-prosecutor-committee-established-review-nato-bombing-campaign-against-federal.

14 Janina Dill, *Applying the Principle of Proportionality in Combat Operations*, Oxford Institute for Ethics, Law and Armed Conflict, December 2010, p. 4.

15 See, generally, Geoffrey S. Corn, "War, Law and the Oft Overlooked Value of Process as a Precautionary Measure", *Pepperdine Law Review*, Vol. 42, No. 3, 2015.

16 See AP I, Arts 57 and 58; ICRC Customary Law Study, above note 6, Rules 15–24.

17 AP I, Arts 57(1) and (2)(a)(i); ICRC Customary Law Study, above note 6, Rule 15.

18 AP I, Art. 57(2)(a)(ii); ICRC Customary Law Study, above note 6, Rule 16.

19 AP I, Arts 57(2)(a) and (b); ICRC Customary Law Study, above note 6, Rule 17.

20 Michael N. Schmitt, "The Principle of Discrimination in 21st Century Warfare," *Yale Human Rights and Development Law Journal*, Vol. 2, 1999, p. 170; Harvard University Program on Humanitarian Policy and Conflict Research, *Commentary on HPCR Manual on Air and Missile Warfare*, 2010, Commentary on Rule 32(b), para. 3.

21 AP I, Art. 57(2)(b); ICRC Customary Law Study, above note 6, Rule 19.

22 ICTY, above note 13, para. 29: "A military commander must set up an effective intelligence gathering system to collect and evaluate information concerning potential targets. The commander must also direct his forces to use available technical means to properly identify targets during operations. Both the commander and the aircrew actually engaged in operations must have some range of discretion to determine which available resources shall be used and how they shall be used."

Both the attacker and the attacked must take precautions. The party that is the object of attack has an obligation "to the maximum extent feasible" to "endeavor to remove the civilian population, individual civilians and civilian objects under their control from the vicinity of military objectives" and "take the other necessary precautions to protect the civilian population, individual civilians and civilian objects under their control against the dangers arising from military operations".[23] Armed actors have an obligation to either keep military objects apart from civilians and civilian objects, or if not feasible, to take other measures to protect civilians and civilian infrastructure from the dangers resulting from military operations. Although not specified by law, examples could include establishing warning and evacuation systems for civilians, constructing bomb shelters and marking dangerous areas.[24]

While some parties to conflict deliberately intermingle with civilian populations, this does not release the party launching an attack from its own obligations to respect the civilian population, including the obligation to take all feasible precautions in attack.[25]

Both the rules of precautions and proportionality are concerned with incidental effects of an attack on civilians or civilian objects. A number of factors can account for incidental loss: the location of civilians within or in the vicinity of the military objective; the terrain (landslides, floods); the type of weapons and munitions as well as the accuracy of the weapons used; weather conditions; the specific nature of the military objectives concerned (ammunition depots, fuel reservoirs, main roads of military importance within the vicinity of populated areas); and the technical skill of the combatants.[26]

Regarding the location of the attack, the rule requiring parties to conflict to take all feasible precautions in the choice of means and methods of warfare can also serve to impose restrictions on the location of the attack by requiring, where circumstances permit, that the parties avoid attacking a populated area if the attack is likely to result in heavy civilian casualties.[27] The obligation can also impose restrictions on the timing and angle of attack, with a view to limiting incidental damage.[28] Precautions in the choice of means and methods of warfare also extend to the choice of weapons and munitions.

An attacking party must also give effective advanced warning unless circumstances do not permit.[29] An effective advance warning is one that allows

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23 AP I, Arts. 57–58; ICRC Customary Law Study, above note 6, Rules 15–24.
24 Jean-François Quéguiner, "Precautions Under the Law Governing the Conduct of Hostilities", *International Review of the Red Cross*, Vol. 88, No. 864, 2006, p. 819.
25 The ICTY has categorically rejected reciprocity as a justification for violations of IHL, affirming that "[t]he defining characteristic of modern international humanitarian law is instead the obligation to uphold key tenets of this body of law regardless of the conduct of enemy combatants". ICTY, *Prosecutor v. Kupreškić*, Case No. IT-95-16-T, Judgment, 14 January 2000, para. 511.
26 Yves Sandoz, Christophe Swinarski and Bruno Zimmermann (eds.), *Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949*, ICRC, Geneva, 1987, para. 2212.
27 J.-F. Quéguiner, above note 24, pp. 800–803.
28 *Ibid.*
29 ICRC Customary Law Study, above note 6, Rule 20.

civilians to protect themselves adequately and gives them sufficient time to evacuate or otherwise seek shelter.

Policies and practices to minimize civilian harm

Civilian harm – death, injury and damage to property – can be avoided or minimized through many different methods. Choosing an appropriate weapons system, munitions warhead fuse and delivery system; considering the distance from which a weapon is launched; and the angle and timing of the attack all potentially affect the level of civilian harm inflicted. Despite improvements in technology, a majority of artillery and mortar systems "have inherent inaccuracies".[30] While there are limited military policies, doctrines, tactics and techniques, operational directives and rules of engagement (ROE) applying specific limits to the choice and use of explosive weapons in populated areas,[31] new guidance and tactics are emerging that aim to minimize civilian harm. These new practices and policies, the US government argues, go beyond what is required by IHL, and when implemented strengthen adherence to the principles of proportionality, precaution and distinction. These practices and policies should be shared with armed actors and adjusted to different theatres and capabilities.

For instance, thorough training of armed actors in the choice of methods and means of warfare, including the use and selection of weapons, is critical to minimizing civilian harm. Policy restrictions on the use of indirect fire weapons in populated areas will also result in avoiding civilian harm. Collateral damage estimation methodologies can be used to assist commanders in foreseeing incidental harm, and can influence variables such as choice of weapon, warhead and munitions fuse. Civilian casualty tracking cells (CCTCs) also allow commanders to systematically assess the impact of operations on civilians. By analyzing the data, commanders will be able to identify particular patterns of harm where the use of certain weapons or tactics results in civilian harm. This in turn will allow the commander to take appropriate corrective measures to reduce civilian harm, such as clarifying targeting guidelines or ROE, improving training and supervision, and employing a weaponeering assessment process.[32]

This section examines the practices of ISAF and AMISOM in the deployment of these myriad tools when fighting in populated areas. In both cases, policy changes were driven by the recognition that civilian casualties can lead to the loss of support for the mission, undermine longer-term political objectives and, ultimately, affect mission success.

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30 ICRC, *Explosive Weapons in Populated Areas: Humanitarian, Legal, Technical and Military Aspects*, report of the ICRC Expert Meeting, 24–25 February 2015, p. 6.

31 The *San Remo Handbook on Rules of Engagement* does expressly prohibit the use of unobserved indirect fire, observed indirect fire or all indirect fire in a number of situations, including populated areas. See the section "Policies Relevant to Protecting Civilians beyond ISAF and AMISOM", below.

32 Weaponeering assessment is the process for determining the quantity of a particular weapon to achieve the specific level of damage desired.

ISAF

Afghanistan has been the test case for the NATO-led ISAF and US Forces Afghanistan's (USFOR-A) implementation of new policies, tactics, techniques and procedures to minimize civilian harm.[33] Methods included employing collateral damage estimates; issuing tactical directives to limit indirect fire and air-to-ground engagements; and creating a CCTC to assess the impact of military operations. Overlaying these policies was the ISAF commander's guidance to all personnel in theatre to reduce civilian casualties. These policies to address civilian harm were adopted by ISAF commanders as mission-critical in the face of growing criticism by the Afghan government and its citizens, and international and national organizations.[34]

ISAF initially limited the use of explosive weapons by banning the use of cluster munitions beginning in 2007, prior to the 2008 Convention on Cluster Munitions. Additionally, beginning in 2007, ISAF and USFOR-A issued a number of tactical directives and fragmentary orders (FRAGOs)[35] to place limitations on weapon use, particularly air-delivered weapons. ISAF issued these directives after high numbers of civilian casualties during combat operations in 2007 and 2008.[36] ISAF recognized that while air-delivered ordinance delivered tactical results, the high number of civilian casualties had "strategic implications" that "forced a fundamental revision of ISAF targeting protocols and engagement procedures".[37]

Civilian harm mitigation efforts undertaken by ISAF

As the operational tempo of ISAF and USFOR-A increased in Afghanistan, so did civilian casualties. This raised concerns from the ICRC, the United Nations

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33 The United States launched Operation Enduring Freedom (OEF) in Afghanistan in October 2001 after the September 11 attacks. Following the UN-initiated Bonn Conference to develop a roadmap for Afghanistan's reconstruction, the UN Security Council in December 2001 authorized ISAF to assist the Afghan Transitional Authority. ISAF was initially led by six-month rotations of troop-contributing countries. When NATO assumed leadership of ISAF operations in August 2003, the international imperative was to provide reconstruction and training assistance to the Afghan government and the Afghan National Security Forces. OEF maintained a concurrent mission in Afghanistan, with the bulk of kinetic action being carried out by US troops. In October 2003, ISAF began to expand beyond Kabul in order to provide stability and security assistance in the Afghan provinces. The expansion took place in four stages from 2003 to 2006. By the last stage of expansion in 2006, ISAF commanded all international military forces across Afghanistan, although OEF remained in operation concurrently. At the same time, anti-government groups stepped up attacks, dramatically increasing the combat operations tempo. As ISAF and OEF combat operations increased, so too did civilian casualties. Center for Civilians in Conflict (CIVIC), *Civilian Harm Tracking: Analysis of ISAF Efforts in Afghanistan*, 2014, p. 3, available at: http://civiliansinconflict.org/uploads/files/publications/ISAF_Civilian_Harm_Tracking.pdf.

34 *Ibid.*; CIVIC interviews with three former ISAF Commanders in 2014; Sarah Sewall and Dr. Larry Lewis, *Reducing and Mitigating Civilian Casualties: Afghanistan and Beyond – Joint Civilian Casualty Study*, Joint Center for Operational Analysis, US Joint Forces Command, 2010 (redacted version on file with author).

35 FRAGOs are issued as a revision to a directive.

36 Interviews with former ISAF officials cited in CIVIC, above note 33.

37 ISAF, *The ISAF Civilian Casualty Avoidance and Mitigation Framework: Sustaining Best Practice*, 31 May 2014 (on file with author), p. 38.

Assistance Mission in Afghanistan (UNAMA), the Afghan Independent Human Rights Commission, Human Rights Watch, Amnesty International and the Center for Civilians in Conflict (CIVIC).

In May 2007, the ISAF leadership ordered an internal report discussing the effect of civilian casualties caused by a US air strike in Shindand, Herat province, the month prior.[38] As a result of the report's findings, in June 2007, General Dan McNeill (commander of ISAF (COMISAF) at the time) issued ISAF's first tactical directive focused on reducing harm by clarifying guidance on night raids, and requiring formal collateral damage estimates (CDEs).[39] The directive states: "Whenever our actions in battle cause injury or death to civilians or property damage or destruction, we diminish our effectiveness." The directive focused on three areas – raids, pre-assault or preparatory fires, and air-to-ground or indirect fire – and ordered that:

- Pre-assault or preparatory fires are to be treated as deliberate targeting operations, which require preapproval and formal collateral damage estimates.
- Air-to-ground or indirect fires are to be used only when forces are taking fire from the compound or there is an imminent threat from the compound, and when there are no other options available to the ground force commander to protect the force and accomplish the mission.
- When tactically feasible, small arms are to be used instead of air-to-ground or indirect fire.[40]

In June 2008, two air strikes in Azizabad caused a significant number of civilian casualties. Information on these events from local and international organizations, including UNAMA, differed dramatically from ISAF's account, warranting a second tactical directive by then COMISAF General McKiernan. The content was similar to the 2007 directive, focusing *inter alia* on air-to-ground and indirect fire and limited their use to purely self-defence and instances where there were no other options for force protection. The 2008 directive also called for acknowledgement of civilian casualties, including property damage, and for forces to document civilian harm through a battle damage assessment (BDA) process.[41]

But the data discrepancies between ISAF and others – including UNAMA, which had begun recording civilian casualties in 2007[42] – were such that ISAF's reporting mechanisms appeared weak.[43] To coincide with the new tactical

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38 CIVIC interview with Major-General Gordon B. Davis, former Chief of the Strategic Advisory Group to COMISAF, March 2014.
39 CIVIC, above note 33, p. 3.
40 2007 Tactical Directive, cited in S. Sewall and L. Lewis, above note 34, p. 23.
41 *Ibid.* US Central Command (CENTCOM) also issued a civilian casualty-related directive in September 2008 in response to the August 2008 Azizabad incident, calling for rapid reporting and investigation. CENTCOM Tactical Directive, September 2008.
42 Oxford Research Group, *The UN and Casualty Recording: Good Practice and the Need for Action*, April 2014, available at: http://oxfordresearchgroup.org.uk/sites/default/files/ORG-UN-and-CR.pdf.
43 Human Rights Watch, *Troops in Contact: Airstrikes and Civilian Deaths in Afghanistan*, September 2008, available at: www.hrw.org/report/2008/09/08/troops-contact-airstrikes-and-civilian-deaths-afghanistan.

directive, in late August 2008 ISAF created a CCTC at ISAF headquarters, to allow ISAF to gather data on harm caused during operations and report it to ISAF leadership.[44] Prior to this, ISAF did not systematically track allegations of civilian casualties, as this was not standard practice for militaries. NATO "did not have procedures or a coherent system to address civilian casualties".[45] Rather, notifications of suspected civilian casualties were investigated for legal violations by troop-contributing countries whose forces were involved. Some nations, such as the United States, also made condolence or *ex gratia* payments for incidental harm.[46]

The CCTC – staffed by two to five personnel depending on resources and housed within the Combined Joint Operations Command in Kabul – initially functioned to strengthen ISAF's internal situational awareness of civilian harm in order to better respond to allegations.[47] Over time, the CCTC began to amass information on civilian casualties and examine it for trends that were used to provide recommendations to ISAF on civilian casualty mitigation.

Command emphasis on civilian casualty mitigation continued to be critical in Afghanistan. The commander's intent was communicated in tactical directives not only to ensure that subordinates understood the importance of civilian casualty mitigation, evidence-based causal factors and proper reporting and assessments, but also to reinforce the requirement of balancing military necessity against the risk of harm to civilians.[48]

Following the establishment of the CCTC in August, General McKiernan issued another directive in December 2008 that called for "good tactical judgment, necessity and proportionality" to drive every action and engagement, and stated that "minimizing civilian casualties is paramount".[49] Unfortunately, these directives were only as effective as their implementation and dissemination. Another incident in Farah province in 2009, where the unit was unaware of the new restrictions, resulted in a July 2009 directive issued by the new ISAF commander, General Stanley McChrystal, which sought to renew ISAF's focus on civilian harm.[50] The directive amplified reporting requirements through BDAs for

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44 CIVIC, above note 33, pp. 2–4.

45 *Ibid.*, p. 3.

46 In 2010, the North Atlantic Council approved amends guidelines for ISAF in Afghanistan that includes acknowledgement and financial assistance for civilian death, injury and property damage. See NATO, "NATO Nations Approve Civilian Casualty Guidelines", 6 August 2010, available at: www. nato.int/cps/en/natohq/official_texts_65114.htm?selectedLocale=en. For further details on amends policies in Afghanistan, see CIVIC, *Addressing Civilian Harm in Afghanistan: Policies and Practices of International Forces*, 2010, available at: http://civiliansinconflict.org/uploads/files/publications/ Addressing_civilian_harm_white_paper_2010.pdf; CIVIC, *Losing the People: The Costs and Consequences of Civilian Suffering*, 2009, available at: http://civiliansinconflict.org/uploads/files/ publications/losing-the-people_2009.pdf.

47 CIVIC, above note 33, p. 5.

48 COMISAF Initial Assessment on Afghanistan, 2009 (unclassified), available at: www.washingtonpost. com/wp-dyn/content/article/2009/09/21/AR2009092100110.html.

49 ISAF Tactical Directive, December 2008, available at: www.nato.int/isaf/docu/official_texts/Tactical_ Directive_090114.pdf.

50 ISAF Tactical Directive, 6 July 2009, available at: www.nato.int/isaf/docu/official_texts/Tactical_ Directive_090706.pdf.

all engagements and reiterated the need to limit air strikes on residential compounds. It emphasized that:

- Leaders at all levels are to scrutinize and limit the use of force such as close air support (CAS) against residential compounds and other locations likely to produce civilian casualties.
- Commanders must weigh the gain of using CAS against the cost of civilian casualties, which in the long run make mission success more difficult and turn the Afghan people against ISAF.
- The use of air-to-ground munitions and indirect fire against residential compounds is only authorized under very limited conditions.[51]

Such guidance also served to institutionalize and improve the flow of data to the CCTC. A new ISAF Standard Operating Procedure 307 was also issued that provided guidance on reporting requirements for civilian casualties.[52] An incident in Kunduz in 2009 led to the term "troops in contact" being redefined to prevent self-defence criteria from being used inappropriately.[53]

Critically, such guidance began to see the desired effect of reducing civilian harm. At a 2013 UN-organized event focusing on explosive weapons in populated areas, Brigadier-General Richard Gross, former legal adviser to the COMISAF, noted that the 2009 directive resulted in a great reduction in civilian casualties as the effect of the directive was to oblige commanders to consider alternatives such as small arms fire or even withdrawing when military personnel's lives were not at risk.[54] UNAMA's annual protection of civilians report noted a decrease in civilian harm attributed to pro-government forces in 2009–10. In 2009, 573 deaths were attributed to both Afghan and international forces; in 2010, the figure was around 429.[55]

Notably, some subordinate-level US commanders were critical of the 2009 directive, interpreting it as more restrictive than was required.[56] There was also a perception among some troops and commanders that the right of self-defence was being compromised.[57] The new COMISAF, General David Petraeus, clarified in his Senate confirmation hearing that "focusing on securing people does not, however, mean we don't go after the enemy".[58] When Petraeus assumed command in July 2010, he conducted a review of all tactical directives and issued a new directive in August 2010, which instructed that "[s]ubordinate commands

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51 The conditions are classified for operational reasons.
52 Author conversation with ISAF CCMT team.
53 Author conversation with Dr. Larry Lewis (see above note 34), noting the ISAF FRAGO, air support request procedures and "troops in contact" terminology, 14 October 2009.
54 Brigadier-General Richard Gross, presenting at the OCHA-Chatham House Meeting on Reducing the Humanitarian Impact of the Use of Explosive Weapons in Populated Areas, 23–24 September 2013.
55 UNAMA, *Afghanistan Annual Report 2014: Protection of Civilians in Armed Conflict*, February 2015, p. 10.
56 Personal interviews with US servicemen, 2013–14.
57 David Zucchino, "As U.S. Deaths in Afghanistan Rise, Military Families Grow Critical", *Los Angeles Times*, 2 September 2010.
58 Opening Statement of General David Petraeus, US Senate Armed Services Committee, 29 June 2010; Elizabeth Bemuller, "Petraeus Pledges to Look at Strikes in Afghanistan", *New York Times*, 29 June 2010, available at: www.nytimes.com/2010/06/30/world/asia/30petraeus.html?_r=0.

are not authorized to restrict this guidance further without my authorization".[59] This new language sought to clarify that the directive was the ceiling and not the floor, and instructed commanders not to add additional restrictions.

Petraeus went further and adopted an even more stringent standard for civilian protection, requiring verification that there were "no civilians present" to approve strikes outside of self-defence.[60] The directive underlined the importance of protection of civilians as key to successful mission completion, while reinforcing the concept of "disciplined use of force".[61] The directive noted that ISAF

> must continue – indeed, redouble – our efforts to reduce the loss of innocent civilian life to an absolute minimum. Every Afghan civilian death diminishes our cause. If we use excessive force or operate contrary to our counterinsurgency principles, tactical victories may prove to be strategic setbacks.[62]

The directive also stressed the importance of training ISAF forces to know and understand the ROE and the intent of the tactical directive so that they would have "the confidence to take all necessary actions when it matters most, while understanding the strategic consequences of civilian casualties".[63]

These tactical directives, and the creation of the CCTC, coincided with an August 2010 study – commissioned by Generals Petraeus and McChrystal – that examined US efforts to reduce and mitigate civilian casualties in Afghanistan. This was yet another attempt to learn and improve ways to address civilian harm by undertaking evidence-based assessment outside the ISAF and USFOR-A chain of command. After analyzing several hundred incidents, the study team, which had top-secret clearance, provided a list of primary causal factors for different types of operations, including air strikes, checkpoint operations, artillery fire and vehicle movements, and made specific recommendations for changes in guidance and tactics. In response, USFOR-A and ISAF made a number of changes to their conduct of operations, improved trainings focusing on civilian casualty mitigation and promulgated new policies for tactical forces in Afghanistan.[64]

In 2011, as new guidance was being issued, the CCTC was expanded into the Civilian Casualty Mitigation Team (CCMT), with more resources dedicated to addressing the causes of civilian casualties and to outreach to civil society for cross-checking allegations and informing mitigation efforts.[65] Led by a colonel, the CCMT created internal working groups with representatives from ISAF headquarters and subordinate commands, and provided guidance

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59 ISAF Tactical Directive, 4 August 2010, available at: www.rs.nato.int/article/isaf-releases/general-petraeus-issues-updated-tactical-directive-emphasizes-disciplined-use-of-force.html.
60 *Ibid.*
61 *Ibid.*
62 *Ibid.*
63 *Ibid.*
64 S. Sewall and L. Lewis, above note 34.
65 CIVIC, above note 33, p. 7.

on civilian casualty avoidance and mitigation. Its mandate included coordinating subject-specific studies and providing recommendations to ISAF leadership; leading the working groups that addressed modification or establishment of policies, tactical directives and standard operating procedures; and collecting and archiving lessons learned and best practices in avoiding civilian harm.[66] Externally, expansion of the CCMT sought to strengthen ISAF's relationship with its Afghan counterparts, UNAMA and NGOs in order to discuss allegations of civilian harm and to cross-check military data with external sources for discrepancies. The dialogue with external and independent organizations was critical for ISAF leadership to re-examine its own incident reporting and engage on recommendations to reduce civilian harm. The tracking data and analysis was used to formulate recommendations to ISAF leadership and to influence recommendations for pre-deployment training on civilian casualty mitigation for the troop-contributing countries.[67]

For instance, analyzing causes of civilian harm incidents led to improvement over time in assessing hostile intent when determining the right to use lethal force, which warranted new guidance. Forces sometimes misinterpreted the intent behind Afghans digging in the ground during the night, suspecting it to be emplacement of IEDs; in actuality, during hot weather Afghans prefer working during the cooler night. Or, because Afghanistan has an armed culture, possession of a weapon does not equate to hostile intent, but when US forces approached a compound, especially at night, Afghan self-defence actions were sometimes misinterpreted as hostile intent, making it difficult to discern civilians. US forces then began to use tactics such as "call-outs", and other forces worked through local leaders to reduce the risk of surprising the population and thus avoid civilian harm.[68]

Notably, the various tactical directives and guidance and the creation of the CCMT, including sustained engagement with external organizations like UNAMA, led to an improvement in reporting and analysis of civilian harm over time. Identified lessons from incidents allowed forces to learn from mistakes rather than repeating them. As the co-author of the *Joint Civilian Casualties* study, Dr. Larry Lewis, told CIVIC, the successive directives showed the benefit of "revising guidance to reflect improved understanding".[69] Command emphasis on minimizing civilian harm continued – for instance, ISAF again revised an earlier directive on 30 November 2011, reminding forces that civilian presence should be assumed, and that all Afghans were to be presumed civilians unless proven otherwise. ISAF also emphasized trainings and post-strike investigations.[70] Then

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66   *Ibid.*
67   *Ibid.*
68   Author conversations with US servicemen and ISAF. See also Harvard Law School International Human Rights Clinic, *Tackling Tough Calls: Lessons from Recent Conflicts on Hostile Intent and Civilian Protection*, March 2016, available at: www.justsecurity.org/wp-content/uploads/2016/03/Tackling-Tough-Choices-Hostile-Intent-HLSIHRC-2016.pdf.
69   Personal interview with Dr. Larry Lewis, Center for Naval Analysis, July 2015.
70   Revision 3 of ISAF Tactical Directive on Defensive Operations, available at: www.isaf.nato.int/images/docs/20111105%20nuc%20tactical%20directive%20revision%204%20(releaseable%20version)%20r.pdf.

COMISAF General John Allen reiterated the need to "balance our pursuit of the enemy with our efforts to minimize the loss of innocent civilian life and our obligation to protect our troops".[71]

ISAF also employed and refined its collateral damage estimation methodology, which was noted in the first 2007 tactical directive, to assist commanders in foreseeing incidental civilian harm in targeting decisions and minimizing harm by altering variables like choice of weapon, warhead and munitions fuse, and the timing and angle of the attack.[72] Population density, building material and secondary fragmentation, among other information about the target and its surroundings, were considered in carrying out a CDE.[73] The availability, range and quality of information used for the CDE depended on the context, while the depth of the CDE analysis depended on whether targets were time-sensitive (see discussion below).

Concurrently with the tactical directives and creation of the CCMT, ISAF emphasized training to reduce civilian casualties. ISAF fed civilian casualty training requirements back to the NATO command structure, and these were subsequently included in NATO Training Directive 75–8 and civilian casualty prevention and mitigation training.[74] This fed into pre-deployment trainings and in-mission trainings of forces, and into supplementary publications focusing on civilian casualty mitigation including the *Afghanistan Civilian Casualty Prevention Handbook* and *Rules of Engagement Vignettes*.[75]

These directives, tools such as CDEs, BDAs and the CCMT, and trainings worked, and civilian harm attributed to ISAF decreased. UNAMA, which maintained a consistent dialogue with ISAF on civilian casualties and issued annual reports with statistics mapping out the impact of conflict and types of civilian harm on men, women and children, reported a steady decline in harm caused by ISAF despite a troop surge in 2010–12. In 2007, UNAMA attributed 629 deaths to pro-government (both Afghan and international) forces.[76] By the end of the ISAF mission in 2014, the average number of civilian casualties per ISAF-caused incident was reduced by almost 75%: in 2009, there were 573 deaths attributed to Afghan and international forces; in 2010, 429; in 2011, 519; in 2012, 324; in 2013, 354; and in 2014, at the end of the ISAF mission, UNAMA attributed 162 deaths to international military forces.[77]

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71 Allen Tactical Directive, November 2011, available at: www.pksoi.org/document_repository/doc_lib/20111105%20nuc%20tactical%20directive%20revision%204%20(releaseable%20version)%20r%5B1%5D.pdf.
72 CIVIC interviews with USFOR-A and ISAF officials, 2010–12.
73 *Ibid.*
74 NATO Joint Analysis and Lessons Learned Centre, *Protection of Civilians: How ISAF Reduced Civilian Casualties*, 1 June 2015 (on file with author).
75 Center for Army Lessons Learned, *Afghanistan Civilian Casualty Prevention Handbook*, June 2012 (CIVIC was a contributing author to this handbook); Center for Army Lessons Learned, *Rules of Engagement Vignettes: Observations, Insights and Lessons*, May 2011.
76 See UNAMA, above note 55, p. 10.
77 *Ibid.*, pp. 10, 78.

AMISOM

On 19 January 2007, the African Union Peace and Security Council created AMISOM, endorsed by the UN Security Council one month later.[78] AMISOM's mandate included a variety of tasks, including protecting the Somali Transitional Federal Government (TFG), conducting an enforcement campaign against Al-Shabaab and other actors fighting the TFG, implementing a range of civilian-military projects, policing tasks, and providing training and support to TFG security forces.[79]

Much of the fighting in Mogadishu was conducted along traditional front lines, with the TFG and AMISOM controlling one part of the city and Al-Shabaab another. Both parties relied heavily on artillery fire and other indirect fire weapons. In a tactic documented by CIVIC as well as Human Rights Watch, Al-Shabaab would fire mortars from locations with significant civilian presence but refuse to let civilians leave those areas.[80] When AMISOM returned fire with heavy weapons, civilian casualties were inevitable. Al-Shabaab also used converted Toyota minibuses as mobile artillery launchers to fire at TFG and AMISOM forces before quickly departing the scene, leaving the area exposed to retaliatory fire.[81] AMISOM vehicles caused injuries through road traffic accidents,[82] and other forms of collateral harm occurred when civilians were caught in the crossfire, as front lines in Mogadishu moved often and unpredictably.

Amidst growing concerns that civilian casualties were undermining operational success, AMISOM implemented a number of corrective actions. External advisers were brought in, including CIVIC, to conduct an assessment and recommend changes, which included the development of a new indirect fire policy, revision of the ROE, revamping AMISOM's approach to strategic communications, and creating a CCTC. These were designed to better meet AMISOM's obligations under IHL, but were also in line with ISAF's view that civilian casualties undermined mission success and longer-term objectives.

Indirect fire policy

The indirect fire (IDF) policy set forth the intent of AMISOM to minimize civilian harm through changes in policies, ROE, and response to civilian harm. The introduction to the IDF policy states:

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78 The Peace and Security Council is the standing organ of the African Union for the prevention, management and resolution of conflicts. For more information, see: www.au.int/en/organs/psc.
79 Paul Williams, "The African Union Mission in Somalia and Civilian Protection Challenges", *Stability: International Journal of Security and Development*, Vol. 2, No. 2, 2013, p. 10. CIVIC and UK Major-General Roger Lane conducted an assessment of AMISOM's operations and co-wrote AMISOM's indirect fire weapon policy.
80 CIVIC, *Civilian Harm in Somalia: Creating an Appropriate Response*, 2011, pp. 18–23; Human Rights Watch, "*You Don't Know Who to Blame*": War Crimes in Somalia, 2011.
81 CIVIC, above note 80.
82 *Ibid.*

> Winning the support of the people is the guiding principle for the planning and conduct of all our operations. Minimizing civilian harm must be a guiding principle for the planning and conduct of all our operations, and further is a humanitarian imperative on which we all agree.[83]

The IDF policy articulates a three-step process of "Avoid, Attribute and Amend":

- Where possible, AMISOM will *avoid* the use of IDF, which can cause extensive civilian casualties. Indirect fire will only be used for self-defense in extreme cases, and to protect the civilian population where a clear military objective is identified and where the military advantage gained is overwhelmingly superior to the potential risk of harm to the civil population.
- When IDF is reported, AMISOM must *attribute* responsibility to the originator – detect the origin of IDF, correlate this with AMISOM's own IDF firing records and apologize quickly when responsible; refute the allegation by accounting for the use of its weapons accurately; or apportion responsibility to opposing forces, based on credible intelligence.
- Make *amends*[84] for civilian harm caused unintentionally by AMISOM by recognizing losses and providing immediate assistance to those who have been injured, distressed or otherwise affected by AMISOM operations, including IDF.[85]

Other measures taken by AMISOM included creating no-fire zones around hospitals, residential areas, markets, religious places and camps for internally displaced persons, and restricting the use of 107 mm rocket artillery. The measures undertaken reflected the accuracy problems of this wide-area-effect weapon in harming civilians. Counter-battery fire was limited to "de-populated areas" in order to minimize collateral damage.[86] The IDF policy recommended the use of CDEs before weapon use, mandatory refresher training for military personnel involved in the use of IDF, after-action reports following an incident to identify lessons and feed into trainings, employing unarmed aerial vehicles (UAVs or "drones") to record patterns of life to improve distinction, and the creation of a CCTC.

In late 2011, the IDF policy recommendation to create a CCTC was heeded when this mechanism was endorsed by UN Security Council Resolution 2036. In 2012, the African Union Commission provided support to AMISOM to develop a mission-wide strategy to incorporate the protection of civilians into AMISOM operations. The civilian casualty tracking analysis and response cell (CCTARC)

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83 AMISOM, *Commander African Union Mission in Somalia – Indirect Fire Weapon Policy*, 2011 (on file with author).

84 Making amends is the practice whereby parties to a conflict acknowledge civilian harm and offer culturally appropriate and dignifying gestures of assistance in accordance with victims' needs and preferences, despite having no legal obligations to do so. See CIVIC, "Frequently Asked Questions on Amends", available at: http://civiliansinconflict.org/uploads/files/publications/Amends_FAQ_2013.pdf.

85 AMISOM, above note 83.

86 Counter-battery fire is return fire against an enemy IDF position.

began operating in 2015.[87] The AMISOM CCTARC – composed of data, military and legal analysts – is tasked with tracking incidents and allegations of civilian harm, analyzing causes of harm and recommending guidance on tactics and trainings, responding to individual incidents and ensuring that civilians receive amends (acknowledgment and assistance), and engaging in dialogue with external organizations in order to cross-check internal incident reporting.

Implementing the IDF policy specifically on restrictions on the use of counter-battery fire in populated areas resulted in a reduction of civilian harm by AMISOM in Mogadishu.[88] While no public data recording the number of civilian deaths and injuries attributed to AMISOM, like UNAMA's recording mechanism for Afghanistan, is available, AMISOM reports that it is investigating allegations of civilian casualties and apologizing to civilians accidentally harmed by AMISOM.[89]

Policies relevant to protecting civilians beyond ISAF and AMISOM

While this article does not include a survey of all military doctrines and policies, as many are not publicly available, a brief overview of those available shows that some militaries recognize the first-, second- and third-order effects of civilian harm.[90]

The *San Remo Handbook on Rules of Engagement*[91] proposes restricting the use of indirect fire weapons, defined as "fire directed at a target that cannot be seen by the aimer and that is not itself used as a point of aim for the weapons or the director",[92] in populated areas.[93] The *Handbook* distinguishes between "observed

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87   CIVIC wrote an implementation plan for the CCTARC and helped to set it up. The CCTARC was established under the authority of the African Union Peace and Security Council, pursuant to the mandate set out in various UN Security Council resolutions, including UNSCR 2036 (2012), UNSCR 2093 (2013), UNSCR 2124 (2013), UNSCR 2182 (2014) and UNSCR 2232 (2015). See also AMISOM, Civilian Casualty Tracking Analysis Cell, available at: http://amisom-au.org/cctarc/.

88   Walter Lotze and Yvonne Kasumba, "AMISOM and the Protection of Civilians in Somalia", *Conflict Trends*, Vol. 2, 2012 (the authors wrote this article in their capacity as civilian planning and liaison officers in the Peace Support Division of the African Union Commission, in Addis Ababa, Ethiopia).

89   AMISOM, "AMISOM Investigates Claims of Civilian Deaths in Wardinle, Bay Region", press release, 19 July 2016, available at: http://amisom-au.org/2016/07/amisom-investigates-claims-of-civilian-deaths-in-wardinle-bay-region/; "AU Mission Apologises for Somali Civilian Deaths," *Al Jazeera*, 17 April 2016, available at: www.aljazeera.com/news/2016/04/amisom-somalia-civilian-deaths-160417132914157.html (AMISOM apologizes for accidentally killing four civilians after soldiers mistook them for Al-Shabaab fighters when they failed to stop at a roadblock).

90   Direct effects are immediate first-order effects, the results of military actions with no intervening effect between act and outcome, and are recognizable – for example, the immediate, physical results of weapons use. Indirect effects are second- and third-order systematic effects that are created though an intermediate effect or mechanism, which may be physical or psychological in nature. Indirect effects tend to be delayed, may be difficult to recognize, and are often a cumulative or cascading result of combined impacts. Joint Chiefs of Staff, *Joint Targeting*, JP 3-60, 31 January 2013, pp. II-35–II-36, available at: http://cfr.org/content/publications/attachments/Joint_Chiefs_of_Staff-Joint_Targeting_31_January_2013.pdf.

91   The *Handbook* reflects best practice from nations across the globe. It is intended not to state the official position of governments or international organizations, but for practitioners to use it as a guide when drafting rules of engagement.

92   International Institute of Humanitarian Law, *San Remo Handbook on Rules of Engagement*, San Remo, November 2009, available at: www.iihl.org/wp-content/uploads/2015/12/ROE-HANDBOOK-ENGLISH.pdf.

93   *Ibid.*

indirect fire", for which the point of impact or burst[94] can be seen by an observer, and "unobserved indirect fire", for which the point of impact or burst is not observed. Direct fire and observed indirect fire are "permitted unless restricted by a rule" of a nation's military. Noteworthy is that the proposed ROE identify "populated areas" as situations where unobserved fire, observed indirect fire or direct fire can be restricted by a rule.[95]

The 2009 Australian Defence Force's joint targeting manual has a broad definition of collateral effects, stating that such effects are "not damage to a target or any directly associated collateral damage to the immediate area, rather they are any effect(s) achieved beyond those for which the action was undertaken".[96] The manual recommends "sound planning" for such collateral effects.[97] The manual also recommends that sensitive targets need not be related to collateral damage. Instead, "a target may be identified as a sensitive target when the commander has estimated that the physical damage and collateral effects on civilian and/or on-combatant persons, property, and environments, occurring incidental to military operations, exceed established national-level notification thresholds." Sensitive targets also include those targets that "exceed national-level rules of engagement … thresholds, or where the commander determines the effects from striking the target may have adverse political ramifications. In essence, sensitive targets require national level approval."[98]

The UK's 2012 *Joint Service Manual of the Law of Armed Conflict* places requirements on its commanders to consider "the foreseeable effects of attack", noting that the "characteristics of the target may be a factor here".[99] Such characteristics can include density of population and infrastructure, dependence on infrastructure, and interconnectedness of urban centres.[100] The manual includes the example of an attack on a military fuel storage depot where there is a foreseeable risk of the burning fuel flowing into a civilian residential area.

In 2012, the US Army issued doctrine through ATTP 3-37.31, *Civilian Casualty Mitigation*,[101] which was updated as the 2015 *Protection of Civilians* doctrine. It recommends alternative methods to limit civilian harm, stating: "During actions on contact, use fire and maneuver rather than indirect fires and airstrikes as the default response, and raise the authority for fires clearance to

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94 Use of the term "burst" in this context indicates that indirect fire is about weapons that explode, but the notion of indirect fire focuses on a mode of delivery rather than on blast and fragmentation effects. *Ibid.*, p. 85.

95 *Ibid.*

96 Australian Defence Force, *Targeting*, ADDP 3.14, 2009, p. 1-10, available at: www.defence.gov.au/foi/docs/disclosures/021_1112_Document_ADDP_3_14_Targeting.pdf.

97 *Ibid.*

98 *Ibid.*, at pp. 1–6. Examples of what are considered sensitive targets are not listed.

99 UK Ministry of Defence, *Joint Service Manual of the Law of Armed Conflict*, 2004, p. 86, para. 5.33.4, available at: www.gov.uk/government/uploads/system/uploads/attachment_data/file/27874/JSP3832004Edition.pdf.

100 See, generally, US Joint Chiefs of Staff, *Joint Urban Operations*, JP 3-06, 20 November 2013, available at: http://pksoi.army.mil/default/assets/File/atp3_07x6.pdf.

101 US Department of the Army, *Protection of Civilians*, ATP 3-07.6, 29 October 2015, section 5-39, available at: http://pksoi.army.mil/default/assets/File/atp3_07x6.pdf.

higher command levels."[102] The manual also recommends using CCTCs and BDAs, which are being implemented by the United States for operations in Iraq and Syria (see below).

The 2013 US *Joint Urban Operations* doctrine similarly emphasizes the potential for civilian casualties in urban areas, noting that such operations "may have more restrictive operational limitations than operations elsewhere".[103] It states:

> The presence of civilians and the need to preserve infrastructure greatly influence operations and help shape the rules of engagement (ROE) and rules for the use of force (RUF). Operations-specific ROE or RUF are often clarified and refined as required by the situation to allow flexibility in accomplishing the mission while limiting civilian collateral damage and friendly casualties.[104]

Specifically, the doctrine instructs the use of precision munitions to "prevent friendly fire, minimize civilian casualties, and limit collateral damage".[105] While the doctrine does not specifically address explosive weapons in populated areas, the instruction is clear that ROE, choice of weapons, and targeting in urban areas are distinct from operations in other locations due to a heightened risk of causing civilian casualties.

Some armed forces, such as those of the United States, United Kingdom and Australia, also have "no-strike" policies in order to reduce the impact of hostilities on civilians, including from the effects of explosive weapons.[106] For example, the US Joint Chiefs of Staff Instruction on *No Strike and the Collateral Damage Estimation Methodology* of October 2012 provides that no-strike entities (NSEs) are those designated by the appropriate authority upon which kinetic or non-kinetic operations are prohibited to avoid violating international law, conventions or agreements, or damaging relations with coalition partners and indigenous populations.[107] NSEs are protected from the effects of military operations,[108] and are categorized based on their sensitivity: either CAT I (most sensitive) or CAT II (less sensitive).[109] The policy refers to "collateral objects"

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102 *Ibid.*

103 US Joint Chiefs of Staff, above note 101, p. I-6.

104 *Ibid.*, p. I-6.

105 *Ibid.*, p. I-7.

106 Australian Defense Force, above note 96, pp. 4-7, 4-8. A no-strike policy states that certain "objects or entities [are] characterised as protected from military effects under international law and/or rules of engagement" and cannot be attacked. The manual does not list what targets are designated on no-strike lists, but the likely entities that are included on a US no-strike list are presented in note 109 below.

107 Chairman of the US Joint Chiefs of Staff, *No Strike and the Collateral Damage Estimation Methodology*, Instruction, 12 October 2012, available at: https://publicintelligence.net/cjcs-collateral-damage/.

108 *Ibid.*, p. B-1.

109 CAT I includes: diplomatic offices, foreign missions; religious, cultural, historical institutions, cemeteries, and structures; intergovernmental organizations (e.g., UN, NATO) and NGO property, equipment and personnel; medical facilities (both civilian and military); public education facilities including non-military schools, colleges, universities, child/day care centres, and institutes; civilian refugee camps and concentrations; prisoner of war camps and concentrations and government detention facilities/prisons; facilities whose engagement may result in pollution that cannot be contained, to include contamination of standing water, streams and rivers; and dams or dykes whose engagement may result in the flooding of civilian areas. CAT II includes: non-military billeting and accommodations, including private

that have a geospatial relationship to a target and may be affected, or potentially affected, by target engagement. Knowledge of the location and function of collateral objects is essential to target development, the no-strike policy and the collateral damage methodology.[110]

In 2012, the United States updated its collateral damage estimation methodology (CDM), and it views CDMs as a means for commanders to adhere to the laws of war.[111] A CDM is typically done via a computer model and is aimed at helping commanders to understand weapon effects, incidental consequences and mitigation techniques. The US Joint Chiefs of Staff Instruction defines collateral damage as unintentional or incidental injury or damage to persons or objects that would not be lawful military targets in the circumstances ruling at the time.[112] The CDM produces a conservative characterization of the risk of collateral damage for commanders and decision-makers, and uses a mix of empirical data, probability, historical observations and complex modelling for analysis. However, it is limited by the quantity and reliability of collected weapons effects data, weapon delivery uncertainties and target information. Furthermore, the CDM cannot always account for the dynamics and unpredictability of the urban operational environment.[113]

Notably, the CDM does not account for unknown transient civilian or non-combatant personnel and/or equipment in the vicinity of a target area. This includes cars passing on roads, people walking down the street, or other civilian entities whose presence in the target area cannot be predicted to a reasonable certainty within the capabilities and limitations of intelligence collection means. The Instruction notes that it is an inherent responsibility for commanders, at all levels, to employ due diligence to identify assemblies of civilian or non-combatant personnel and/or property in the target area and de-conflict target engagements when possible.[114]

The Instruction notes that the CDM does not account for the use of cluster or improved conventional munitions beyond CDE Level 3 (a weaponeering assessment process)[115] because of the greater risk of unexploded ordnance and

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civilian housing and family housing on military or government property; civilian meeting places including athletic fields, stadiums, racetracks, parks, civic and convention centres, theatres, amusement parks, markets and recreational facilities; public utilities and facilities including those that generate, distribute or transport electricity, petroleum or water intended for civilian consumption; commercial fuel service stations, civilian mass transit facilities, water supply facilities, waste facilities, urban gas supply, fire stations, postal facilities, police stations, civil defence facilities and financial institutions; agricultural processing and storage facilities that produce, market or distribute foodstuffs for civilian consumption; public utilities, industrial facilities and storage depots that have the potential to release toxic chemicals that may contaminate air, food, soil or water resources; and facilities and/or structures for which the functionality/purpose is unknown.

110 *Ibid.*, p. B-7.
111 *Ibid.*, p. D-1.
112 *Ibid.*, p. D-2.
113 *Ibid.*, pp. D-1–D-2, D-5.
114 *Ibid.*
115 The goal of CDE Level 3 is to achieve a low collateral damage estimate while limiting the number of tactical weaponeering restrictions. CDE Level 3 determines appropriate delivery systems and warhead and fuse combinations that mitigate the risk of collateral damage while still achieving the desired effect on the target. *Ibid.*

the limited weaponeering options available to mitigate the risk of collateral damage.[116] Rocket-assisted projectiles or enhanced/extended-range artillery, mortar and naval gun munitions are similarly not addressed beyond CDE Level 3 due to the considerable increase in ballistic errors and subsequent increased risk to civilians when used in urban areas.[117] The CDM does not account for secondary explosions – the policy instructs that collateral damage due to secondary explosions (weapons caches or fuel tanks for military equipment) cannot be consistently measured or predicted, so commanders are instructed to remain cognizant of any additional risk.[118]

While CDM assessments are important to foresee the impact of weapons use and tactics, the quality and source of information analyzed may vary in quantity and quality. Notably, the CDM relies on in-depth analysis for pre-selected targets, versus on-the-spot analysis used for dynamic or time-sensitive targets.[119]

Battle damage assessments taking into account civilian harm and not just damage caused to the enemy are also now routine for US operations. BDA is the estimate of target damage or effect, which is based on assessments of physical damage, functional damage and target systems, resulting from the application of lethal and non-lethal capabilities.[120]

While BDAs are important for assessing an operation, relying solely on aerial BDAs without ground inspection can result in an incomplete picture of civilian harm. Thus, it is critical to ensure that reporting by third-party organizations with a presence on the ground – such as NGOs, the ICRC or the UN – is considered and cross-checked with operational data to get a complete picture about a particular strike. Underestimating civilian harm by relying only on military data risks not addressing causes for the harm and thus making some of the tools discussed in this paper ineffective.

In July 2016, NATO issued a Policy for the Protection of Civilians that recognizes the lessons learned on civilian casualty mitigation from ISAF, stating that it was committed to institutionalizing these lessons in its operations.[121] NATO has also incorporated the US CDM in its operations.[122] Notably,

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116 *Ibid.*, pp. D-5–D-6.
117 *Ibid.*, p. D-6.
118 *Ibid.*
119 ICRC, above note 30, p. 29.
120 Physical damage includes the quantitative extent of physical damage through munitions blast, fragmentation and/or fire damage effects to a target. Functional damage estimates the effect of attacks and other force employment on the target's ability to perform its intended mission. It may also include an estimate of the time required for the enemy to reconstitute or replace the target functions destroyed or degraded. Target system assessment is a broad assessment of the impact and effectiveness of all types of attacks. US Joint Chiefs of Staff, above note 90, Appendix D, pp. D-4–D-6.
121 NATO, "NATO Policy for the Protection of Civilians", 9 July 2016, available at: www.nato.int/cps/en/natohq/official_texts_133945.htm?selectedLocale=en (also reflecting lessons on civilian casualty mitigation from Afghanistan).
122 Author interview with NATO official at Joint Force Command Brunssum, February 2016.

Afghanistan is seeking to develop capabilities for better reporting and analysis of civilian harm.[123]

Conclusion

Warfare wreaks havoc to civilian lives, schools, homes, hospitals, and critical infrastructure. Harm to civilians can be minimized through adherence to IHL and utilizing additional tools and trainings to minimize civilian harm in populated areas, and through adoption of policies that prioritize civilian protection discussed in this article.[124]

Some warring parties in current conflicts are implementing some of the tools examined in this article. For instance, in Iraq and Syria, while many armed actors have been found to violate IHL,[125] the US-led Combined Joint Task Force Operation Inherent Resolve, which includes the UK, Australia, Denmark and other countries who participated in the ISAF mission, is applying many of the policies learnt from Afghanistan, including BDAs, which include civilian harm, and CDMs in targeting the Islamic State (ISIS) group in populated areas where ISIS is entrenched.[126] The United States has also created a civilian casualty mitigation team for Iraq and Syria to track and investigate allegations of civilian harm and to identify lessons for the purposes of modifying tactics.[127]

However, more needs to be done to use these tools effectively to reduce deaths and injuries attributed to the anti-ISIS coalition air campaign.[128] Civilian

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123 CIVIC has provided technical assistance to the Afghan government in developing civilian casualty mitigation tools and provided input on a national civilian casualty mitigation and prevention policy. NATO's Resolute Support "train, assist and advise" mission, which began in 2015 after ISAF, is working with Afghan security forces on such policies, tools and trainings.

124 Notably, President Barack Obama issued an executive order on addressing civilian casualties that reflects lessons learned in Afghanistan: see "United States Policy on Pre- and Post-Strike Measures to Address Civilian Casualties in U.S. Operations Involving the Use of Force," 1 July 2016, available at: www.whitehouse.gov/the-press-office/2016/07/01/executive-order-united-states-policy-pre-and-post-strike-measures.

125 See, e.g., UN Assistance Mission for Iraq, *Report on the Protection of Civilians in the Armed Conflict in Iraq*, 1 May–31 October 2015; Office of the High Commissioner for Human Rights, *Report of the Independent International Commission of Inquiry on the Syrian Arab Republic*, A/HRC/31/68, 11 February 2016.

126 Author conversations with UK, US and Australian military forces involved in the anti-ISIS air campaign. (strict controls in place to limit civilian casualties), available at: www.abc.net.au/news/2015-09-16/australian-fighter-jets-first-air-strikes-syria-us-military/6779104.

127 Author conversation with CENTCOM. The US government has also authorized amends (acknowledgement and condolence payments) for incidental civilian harm caused during its operations in Iraq and Syria. Department of Defense Press Briefing by Rear Adm. Kirby in the Pentagon Briefing Room, 14 October 2014, available at: www.defense.gov/News/Transcripts/Transcript-View/Article/606936 (amends for Syria); National Defense Authorization Act for Fiscal Year 2016, section 1211, available at: www.gpo.gov/fdsys/pkg/BILLS-114s1356enr/pdf/BILLS-114s1356enr.pdf (authorizing *ex gratia* payments for incidental damage, personal injury or death).

128 As of 2 February 2017, the United States has admitted to causing 199 civilian casualties in Iraq and Syria since the air campaign began in mid-2014, and is investigating allegations by NGOs and those reported in the media. See CENTCOM, *Combined Joint Task Force – Operation Inherent Resolve Monthly Civilian*

death and injuries, as well as the scale of physical destruction of cities – once most civilians have left – like Ramadi, Zumar and Sinjar in Iraq and Kobane in Syria, also highlight the challenges and costs of dislodging a group that embeds itself in homes and rigs cities with IEDs and booby traps.[129] Fighting in populated areas urgently necessitates creative thinking by military planners involved in the air campaign in Iraq and Syria in order to constantly learn and improve tactics to minimize civilian harm, including by vigorously cross-checking their data on civilian harm with external sources to ensure maximum effectiveness of operations and the stated intent to minimize civilian harm.[130]

In Iraq, local ground forces backed by the coalition have yet to adopt some of the tools and trainings on civilian protection, and need urgent support to develop in order to minimize civilian harm.[131] While computer-generated CDMs may be advanced for some forces, armed actors, in addition to adhering to IHL, should conduct BDAs that include civilian harm considerations and collect and analyze such data in a tracking cell to understand how tactics are impacting civilians and what mitigation measures should be undertaken. Such an effort would begin to

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Casualty Report, 2 February 2017, available at: www.centcom.mil/MEDIA/PRESS-RELEASES/Press-Release-View/Article/1068742/combined-joint-task-force-operation-inherent-resolve-monthly-civilian-casualty/. As of 30 January 2017, Airwars – a transparency project monitoring the air campaign against ISIS and other groups and recording civilian harm in Iraq, Syria and Libya – had attributed over 2,300 deaths and injuries to the anti-ISIS coalition in Iraq and Syria, but it "cautions" on the number "given the significant challenges of casualty verification". Civilian casualties attributed to Russian air strikes in Syria, supporting the Syrian regime from September 2015 to December 2016, number over 8,000. (See, generally, *Airwars.com*.) In Afghanistan as well, although the ISAF mandate ended in 2014, US forces in Afghanistan who are training Afghan forces, and who since June 2016 have been allowed to conduct air strikes against the Taliban in support of the Afghan security forces, must strictly adhere to guidance and policies to minimize civilian harm and prevent any recurrence of events like the October 2015 attack on the Medécin Sans Frontiéres hospital in Kunduz. A US military investigation found that US forces did not know they were firing at a medical facility, and that "a combination of human errors, compounded by process and technical errors" resulted in the attack. The investigation also found that certain personnel failed to adhere to ROE and violated the law of armed conflict. CENTCOM, "CENTCOM Releases Investigation into Doctors without Borders Trauma Facility", 29 April 2016, available at: www.centcom.mil/news/press-release/april-29-centcom-releases-kunduz-investigation.

129 The author visited Zummar and several towns and villages in Nineveh governorate, and villages in Kirkuk governorate, in Iraq, and Kobane in Syria, in 2015. In 2016, the author interviewed civilians who fled Ramadi as Iraqi forces retook the city from ISIS. Sahr Muhammedally, "Retaking Mosul: ISIS and Human Shields", *MENASource*, 16 March 2016, available at: www.atlanticcouncil.org/blogs/menasource/retaking-mosul-isis-and-human-shields; Tribune Writers, "Iraqi City Ramadi Once Home to 500,000 Now Lies in Ruins", *Chicago Tribune*, 17 January 2016, available at: www.chicagotribune.com/news/nationworld/ct-ramadi-iraq-buildings-destroyed-20160117-story.html.

130 Prime Minister David Cameron, "PM Statement Responding to FAC Report on Military Operations in Syria", 26 November 2015, available at www.gov.uk/government/speeches/pm-statement-responding-to-fac-report-on-military-operations-in-syria ("We have the Brimstone precision missile system, which enables us to strike accurately with minimal collateral damage"); Colonel Steve Warren, Operation Inherent Resolve Spokesperson, Department of Defense Press Briefing via Teleconference in Pentagon Briefing Room from Baghdad, Iraq, 28 October 2015, available at: www.defense.gov/News/News-Transcripts/Transcript-View/Article/626351/department-of-defense-press-briefing-by-colonel-warren-via-teleconference-in-th ("We put a lot of energy into developing targets and we'll continue to develop targets and refine them, and redevelop them and watch them and make sure that those targets meet our standards for minimizing destruction of civilian infrastructure and of course civilian casualties").

131 Sahr Muhammedally, "Iraq: Learning Civilian Protection the Hard Way", *Stability: International Journal of Security and Development*, Vol. 4, No. 1, 2015, available at: www.stabilityjournal.org/article/10.5334/sta.ge/.

inculcate a protection mindset amongst armed actors who are retaking territories from opposing groups and holding territory.

Adopting policies and tactics to minimize civilian harm needs leadership, as it plays a key role in how an armed actor sees its role in prosecuting a war in accordance with IHL, but also from a strategic lens. The Lieber Code, the first modern codification of the laws of war, told the armies of the United States of 1863 that "[m]ilitary necessity does not include any act of hostility which makes the return to peace unnecessarily difficult".[132] This advice is as applicable now as it was then. Military necessity that fails to prioritize civilian protection, especially in populated areas, will undermine success by making the return to peace more difficult. Armed actors need to adopt a protection mindset when fighting in populated areas, and adopt the tools and policies discussed in this article to minimize civilian harm. Focusing on tactical gains but not protecting civilians can result in a protracted war, with civilians continuing to pay the ultimate cost.

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132 Francis Lieber, *Instructions for the Government of Armies of the United States in the Field*, General Order No. 100, 24 April 1863, Art. 16.

Permitted for law enforcement purposes but prohibited in the conduct of hostilities: The case of riot control agents and expanding bullets

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Abstract

Riot control agents and expanding bullets are the only two kinds of weapon and ammunition that are used for law enforcement purposes but are explicitly prohibited in the conduct of hostilities. This article justifies this difference in treatment with two arguments. First, riot control agents and expanding bullets have different effects on the human body depending on their specific types and the circumstances in which they are deployed. Second, the issues raised by their use differ according to whether they are employed for law enforcement purposes or in the conduct of hostilities.

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Introduction

To maintain public order, police forces around the world commonly use irritant gases – known as "riot control agents" – and bullets that are designed to flatten and deform on impact, which we shall call "expanding bullets". Hardly a month goes by without news that a demonstration somewhere has been broken up using tear gas.[1] This practice has been widely documented in the United States, the United Kingdom, Germany and France.[2] Although less widely reported on in the media, expanding bullets are also frequently used by police around the world, including the New York Police Department,[3] Swiss cantonal police forces[4] and the French national police.[5] Riot control agents and expanding bullets have a unique attribute in common compared with other weapons and ammunition: although they are widely used by police forces around the world, they are forbidden as a means of warfare in situations of armed conflict.

The banning of riot control agents as a means of warfare can be traced back to the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare (Geneva Protocol) of 1925. Since this treaty prohibits "the use in war of asphyxiating, poisonous or other gases",[6] a majority of States have held that the term "other", which is rendered as "similaire" in the French version of the text (both versions are equally authentic[7]), covers riot control agents.[8] According to Wil D. Verwey, this interpretation is consistent with both the preparatory work and the context in

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1 For example, Ian Simpson and Warren Strobel, "Thousands of Police Descend on Baltimore to Enforce Curfew after Riots", *Reuters.com*, 28 April 2015, available at: www.reuters.com/article/us-usa-police-baltimore-idUSKBN0NI1N720150428 (all internet references were accessed in February 2016); Renee Maltezou and Alkis Konstantinidis, "Greek Police Turns to Tear Gas as Tempers Flare over Pensions", *Reuters.com*, 4 February 2016, available at: www.reuters.com/article/us-eurozone-greece-strike-idUSKCN0VD0O0; "Swiss Use Tear Gas, Rubber Bullets to Break Up Kurdish Rally", *Reuters.com*, 8 February 2016, available at: www.reuters.com/article/us-turkey-kurds-swiss-idUSKCN0VH1PV.
2 Wil D. Verwey, *Riot Control Agents and Herbicides in War*, Sijthoff, Leiden, 1977, pp. 13–14.
3 James R. Gill and Melissa Pasquale-Styles, "Firearm Deaths by Law Enforcement", *Journal of Forensic Sciences*, Vol. 54, No. 1, 2009, p. 188.
4 "Controversy Mounts Over Police Plans to Use Dumdum Bullets", *Swissinfo.ch*, 26 July 2001, available at: www.swissinfo.ch/eng/controversy-mounts-over-police-plans-to-use-dumdum-bullets/2158044; Adam Beaumont, "Amnesty Takes Aim at New Police Bullets", *Swissinfo.ch*, 24 August 2006, available at: www.swissinfo.ch/eng/amnesty-takes-aim-at-new-police-bullets/5402856; "Feu vert aux balles expansives en Suisse", *RTS.ch*, 28 June 2010, available at: www.rts.ch/info/suisse/1112626-feu-vert-aux-balles-expansives-en-suisse.html.
5 AFP, "De nouvelles munitions pour la police", *Lefigaro.fr*, 13 September 2010, available at: www.lefigaro.fr/flash-actu/2010/09/13/97001-20100913FILwww00526-nouvelles-munitions-pour-police-et-douanes.php; Brendan Kemmet, "Jugées 'trop dangereuses', la police change de munitions", *Francesoir.fr*, 13 September 2010, available at: www.francesoir.fr/actualite/societe/jugees-trop-dangereuses-police-change-munitions-56850.html; "Les nouvelles balles de la police", *Planet.fr*, 17 September 2010, available at: www.planet.fr/dossiers-de-la-redaction-les-nouvelles-balles-police.29781.1466.html.
6 Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, 94 LNTS 65, 17 June 1925 (entered into force 9 May 1926).
7 *Ibid.*
8 Jean-Marie Henckaerts and Louise Doswald-Beck (eds), *Customary International Humanitarian Law*, Vol. 1: *Rules*, Cambridge University Press, Cambridge, 2005 (ICRC Customary Law Study), pp. 263–264.

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which the Geneva Protocol was adopted.[9] In the late 1960s and early 1970s, however, this reading was challenged by several States party to the Protocol (Australia, Portugal and the United Kingdom) and by the United States, which, although not a party to the Protocol, applied its provisions.[10] The Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction (Chemical Weapons Convention, CWC) of 1993,[11] ratified by 192 States as of 17 October 2015,[12] defines riot control agents as "any chemical … which can produce rapidly in humans sensory irritation or disabling physical effects which disappear within a short time following termination of exposure",[13] and establishes that their use "as a method of warfare" is forbidden.[14] The status of this ban as customary law in both international[15] and non-international[16] armed conflicts is widely accepted. As such, it comprises Rule 76 of the International Committee of the Red Cross (ICRC) study *Customary International Humanitarian Law* (ICRC Customary Law Study).[17]

The use of expanding bullets, meanwhile, was outlawed by the Declaration relative to the Prohibition of Bullets which Expand in the Human Body (Hague Declaration), which was adopted in The Hague on 29 July 1899[18] at the close of the First Peace Conference,[19] because of the atrocious wounds they caused. The plenipotentiaries were "inspired by the sentiments which found expression in the Declaration of St Petersburg".[20] In that document, the signatories had considered

> that the only legitimate object which States should endeavour to accomplish during war is to weaken the military forces of the enemy; that for this purpose it is sufficient to disable the greatest possible number of men; that this object would be exceeded by the employment of arms which uselessly aggravate the

9 W. D. Verwey, above note 2, pp. 228–239.

10 ICRC Customary Law Study, above note 8, pp. 263–264.

11 Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction, 1975 UNTS 4, 13 January 1993 (entered into force 29 April 1997) (CWC), Art. I(5).

12 Organisation for the Prohibition of Chemical Weapons, *Note of the Technical Secretariat: Status of Participation in the Chemical Weapons Convention as at 17 October 2015*, 17 October 2015, p. 1, available at: www.opcw.org/fileadmin/OPCW/S_series/2015/en/s-1315-2015_e_.pdf.

13 CWC, Art. II(7).

14 *Ibid.*, Art. I(5). In the French text of the CCW, the expression "moyen de guerre" is literally closer to "means of warfare" than "method of warfare". The English and French texts of the CCW are equally authentic according to Article XXIV.

15 Yoram Dinstein, *The Conduct of Hostilities under the Law of International Armed Conflict*, Cambridge University Press, Cambridge, 2004, pp. 74–75.

16 Eric David, *Principes de droit des conflits armés*, 5th ed., Bruylant, Brussels, 2012, p. 386, para. 2157.

17 ICRC Customary Law Study, above note 8, p. 265.

18 Declaration relative to the Prohibition of Bullets which Expand in the Human Body, 29 July 1899 (entered into force 4 September 1900) (Hague Declaration), in Netherlands Ministry of Foreign Affairs, *The Proceedings of the Hague Peace Conferences*, Martinus Nijhoff, The Hague, 1907, translated by the Carnegie Endowment for International Peace, Washington, DC, 1920, Part I, Annexes, p. 262.

19 *Ibid.*

20 *Ibid.*

sufferings of disabled men, or render their death inevitable; that the employment of such arms would, therefore, be contrary to the laws of humanity.[21]

These considerations reflect the principle of the prohibition against causing unnecessary suffering, which the International Court of Justice (ICJ) has recognized as one of the cardinal principles of international humanitarian law (IHL):

> According to the second principle, it is prohibited to cause unnecessary suffering to combatants: it is accordingly prohibited to use weapons causing them such harm or uselessly aggravating their suffering. In application of that second principle, States do not have unlimited freedom of choice of means in the weapons they use.[22]

The ban on using expanding bullets is also considered to be a customary rule, applicable in both international and non-international conflicts. It constitutes Rule 77 of the ICRC Customary Law Study.[23]

The legitimacy of this state of law has been criticized in a way that calls to mind the position adopted by the ICJ in 1949, namely that "elementary considerations of humanity" are "even more exacting in peace than in war".[24] Following this logic, civil society organizations have denounced the use of expanding bullets by police forces[25] on the grounds that projectiles which are banned from the battlefield because they cause inhumane injuries had been or were going to be used by States against their own citizens. During the Ferguson riots in Missouri, the same kind of argument was made against the use of riot control agents.[26] Reversing the ICJ's view, the ban on using these weapons and ammunition as means of warfare in armed conflicts has also been criticized: as riot control agents and expanding bullets are used in peacetime, when standards of humanity are particularly high, then why not use them in war? To justify the use of riot control agents by US forces in Vietnam, Secretary of State Dean Rusk and Secretary of Defence Robert McNamara adopted just that argument on 24 and 25 March 1965, declaring that these weapons could not be regarded as combat gases since they were "recognized weapons used by police units throughout the

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21 Annex to Protocol I of the Military Conferences held in Saint Petersburg, "Mémoire sur la suppression de l'emploi des balles explosives en temps de guerre", *Nouveau Recueil Général de Traités et Autres Actes relatifs aux Rapports de Droit international*, Vol. 18, Göttingen, 1873, p. 460.
22 ICJ, *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, 8 July 1996, *ICJ Reports 1996*, p. 257, para. 78.
23 ICRC Customary Law Study, above note 8, p. 269.
24 ICJ, *Corfu Channel Case* (*United Kingdom of Great Britain and Northern Ireland v. Albania*), Judgment, 9 April 1949, *ICJ Reports 1949*, p. 22.
25 Adam Beaumont, "Amnesty Takes Aim at New Police Bullets", *Swissinfo.ch*, 24 August 2006, available at: www.swissinfo.ch/eng/amnesty-takes-aim-at-new-police-bullets/5402856; Robert Wells, "US Police are Killing People with War-Crimes Ammunition", *Sfbayview.com*, 25 January 2016, available at: http://sfbayview.com/2016/01/us-police-are-killing-people-with-war-crimes-ammunition/.
26 Terrence McCoy, "Tear Gas Is a Chemical Weapon Banned in War. But Ferguson Police Shoot It at Protesters", *Washingtonpost.com*, 14 August 2014, available at: www.washingtonpost.com/news/morning-mix/wp/2014/08/14/tear-gas-is-a-chemical-weapon-banned-in-war-but-ferguson-police-shoot-it-at-protesters/.

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world for riot control".[27] An article in *Time* magazine on 2 April 1965 reasoned that, as the use of gas had only temporary effects, it was ultimately more "humane" than lethal weapons such as napalm bombs and white phosphorus shells.[28] This line of thinking persisted after the entry into force of the CWC. Defence Secretary Donald Rumsfeld thus declared on 5 February 2003:

> In many instances our forces are allowed to shoot somebody and kill them, but they're not allowed to use a nonlethal riot control agent under the law. … There are times when the use of nonlethal riot agents is perfectly appropriate, although legal constraints make for a very awkward situation.[29]

The same position is found concerning expanding bullets in the US Defense Department's *Law of War Manual* (US Law of War Manual) of June 2015: "Expanding bullets are widely used by law enforcement agencies today, which also supports the conclusion that States do not regard such bullets [as] inherently inhumane or needlessly cruel."[30]

This article shall seek to respond to these criticisms and to demonstrate that there is no contradiction between the ban on such weapons and ammunition in the conduct of hostilities and their widespread use in law enforcement. There is a *ratio legis* behind the different legal regimes that we shall explore. Using two quasi-independent but complementary arguments, we shall justify why the use of expanding bullets is permitted in situations of law enforcement and why riot control agents are prohibited as a method of warfare. In the first part, we shall explain that the context in which these weapons and ammunition are used affects their impact on the human body. Thus, riot control agents lose their non-lethal character when used as a method of warfare, as greater amounts are absorbed by the body. As for expanding bullets, they often cause much less serious injuries than the projectiles intended by the Hague Declaration when they are used for law enforcement purposes, because of a difference in kinetic energy. In the second part of the article, we shall develop the complementary argument that, even if these weapons and ammunition were used in the same way for law enforcement purposes and in the conduct of hostilities, the implications of this use would in any case be different. Employing riot control agents as a method of warfare can unleash an escalation to the use of more toxic chemical agents, and the use of expanding bullets in law enforcement complies with certain requirements that do not exist in the rules on the conduct of hostilities. This second argument will also enable us to clarify the boundary between permitted

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27 W. D. Verwey, above note 2, p. 13; Kim Coleman, *A History of Chemical Warfare*, Palgrave MacMillan, New York, 2005, p. 98.

28 *Ibid.*, Nick Lewer and Steven Schofield, *Non-Lethal Weapons: A Fatal Attraction?*, Zed Books, London, 1997, p. 65.

29 Michael L. Gross, *Modern Dilemmas of Modern Warfare: Torture, Assassination and Blackmail in an Age of Asymmetric Conflicts*, Cambridge University Press, Cambridge, 2009, p. 77; Kerry Boyd, "Rumsfeld Wants to Use Riot Control Agents in Combat", *Arms Control Today*, March 2003, available at: www.armscontrol.org/act/2003_03/nonlethal_mar03.

30 General Counsel of the US Department of Defense, *Department of Defense Law of War Manual*, 12 June 2015 (US Law of War Manual), p. 325.

and prohibited uses of these weapons and ammunition depending on the different issues raised.

Different effects

Riot control agents and expanding bullets have different effects on the human body depending on whether they are used in the conduct of hostilities or in the maintenance of public order. We shall first demonstrate that the toxicity of riot control agents differs depending on the context in which they are employed and that they can easily lose their "non-lethal" character if used in combat operations. Secondly, we shall explain that, in the context of law enforcement by police forces, the cartridges used for bullets that are designed to flatten and deform on impact are often different from military rifle cartridges, and therefore do not inflict the same wounds as in the conduct of hostilities.

The toxicity of riot control agents

The CWC defines riot control agents as any chemical "which can produce rapidly in humans sensory irritation or disabling physical effects which disappear within a short time following termination of exposure".[31] It also establishes that these agents cannot be diluted formulae of other types of chemical weapons.[32] The designation as "riot control agents" has been used in the past, however, to pass off lethal methods of chemical warfare as non-lethal. We shall start by defining some basic concepts of toxicology before explaining the importance of the dosage of riot control agents.

Some basic concepts of gas toxicology

The amount of a chemical in the gaseous state or in droplets suspended in the air that is absorbed by a human body is given in terms of its dosage or concentration-time product (Ct). This value depends both on the concentration of the chemical in the air that the person is breathing and the length of time that he or she is exposed to the chemical. It is therefore expressed in "milligrams divided by cubic metres multiplied by minutes", or "milligrams multiplied by minutes divided by cubic metres" ($mg\text{-}min/m^3$).[33] This means that a chemical will have the same effect on a person if he or she is exposed to a given concentration for a given time or to a concentration ten times lower for ten times longer. Each toxic chemical has a dosage above which it has certain effects on the body. It thus has an incapacitating dosage (Ct I), after which the victim is unable

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31 CWC, Art. II(7).

32 Walter Krutzsch and Ralf Trapp, *A Commentary on the Chemical Weapons Convention*, Martinus Nijhoff, Dordrecht, 1994, p. 36.

33 Claude Meyer, *L'arme chimique*, Ellipse, Paris, 2001, p. 136.

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to continue what he or she was doing, and a lethal dosage (Ct L), after which it causes the victim's death. All individuals are affected differently by a given chemical. This is why the dosage beyond which the chemical has the studied effect on 50% of people exposed to it is generally taken as the statistical value. This gives us the incapacitating dosage for half the population concerned (Ct I_{50}, hereafter the incapacitating dosage) or the lethal dosage for the same proportion of the population (Ct L_{50}, hereafter the lethal dosage).[34] The lower this latter value, the more toxic the chemical. Yperite (or mustard gas) has a lethal dosage of 1,500 mg-min/m^3, while the neurotoxic agent sarin has a lethal dosage of 70 mg-min/m^3.

Under the CWC, the States Parties are obliged to declare which types of riot control agents they hold.[35] As of 31 December 2015, 138 States Parties had made such declarations, mainly concerning tear gas.[36] It transpires from these that the most commonly used agents are CS (o-chlorobenzylidene malononitrile), CN (chloroacetophenone) and capsaicinoids (pepper gas). Although these substances act on the human body via different mechanisms, they all have in common that they produce a burning sensation in the eyes, the respiratory tract and the skin that is sufficiently unpleasant or painful as to cause those targeted to flee or be temporarily incapacitated.[37] It is estimated that the incapacitating dosage of CS ranges from 0.1 to 10 mg-min/m^3 and of CN from 20 to 40 mg-min/m^3, depending how the gas is dispersed.[38] According to the studies cited,[39] the estimated lethal dosage of CS ranges from 25,000 to 60,000 mg-min/m^3 and that of CN from 8,500 to 11,000 mg-min/m^3. Thus, even taking the narrowest bracket, the lethal dosage of CS is 2,500 times higher than the incapacitating dosage. The risk of overdosage is therefore in theory very low. By way of comparison, the lethal dosage of sarin is just double the incapacitating dosage (70 and 35 mg-min/m^3 respectively).[40] However, the very existence of a lethal dosage shows that riot control agents are not intrinsically non-lethal. They are only non-lethal if they are dosed accordingly, even allowing for a fairly wide margin of error.

The importance of dosage

Using riot control agents as a method of warfare creates conditions in which the lethal dosages are more likely to be reached, despite the safety margin between

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34 *Ibid.*, p. 137.
35 CWC, Art. III(1)(e).
36 Organisation for the Prohibition of Chemical Weapons, *Report of the OPCW on the Implementation of the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction in 2015*, 30 November 2016, p. 12, para. 1.49, available at: www.opcw.org/fileadmin/OPCW/CSP/C-21/en/c2104_e_.pdf.
37 Eugene G. Olajos and Woodhall Stopford, "Introduction and Historical Perspectives", in Eugene G. Olajos and Woodhall Stopford (eds), *Riot Control Agents: Issues in Toxicology, Safety, and Health*, CRC Press, London, 2004, p. 1.
38 Woodhall Stopford and Frederick R. Sidell, "Human Exposures to Riot Control Agents", in *ibid.*, pp. 202, 206.
39 W. D. Verwey, above note 2, p. 44; C. Meyer, above note 33, p. 193; Eugene G. Olajos and Woodhall Stopford, "Acute Sensory Irritation" in E. G. Olajos and W. Stopford (eds), above note 37, p. 69.
40 C. Meyer, above note 33, p. 136.

the incapacitating and lethal dosages. US troops in Vietnam deployed riot control agents as a method of warfare, and in such a way that they became lethal, by passing off as riot control agents chemicals that were no longer used for this purpose by the police, and using riot control agents in confined areas or delivering them using artillery and air power.

Numerous irritant gases were used during the First World War, in particular BA (bromoacetone) and DM (adamsite).[41] An estimated 12,000 tonnes of irritant gases were used during that conflict[42] – one tenth of the total amount of gas used.[43] This is one of the arguments of those who consider that, from 1925, the Geneva Protocol prohibited the use of riot control agents in war,[44] as they contributed to the horror of the "Great Chemical War".[45] Used for a time as a riot control agent in the interwar years, DM was gradually replaced by CN and abandoned for that purpose because it was too dangerous.[46] It was nonetheless used by US forces in Vietnam. Verwey reports that soldiers serving in Vietnam were instructed not to use agent DM "in an operation where deaths were not acceptable",[47] at the same time as Secretary of Defence Robert McNamara declared that the chemical agents used in Vietnam were no different from those commonly used by police forces around the world.[48]

Even when relatively safe agents were used, such as CS, this was often done in a manner that was at variance with recommendations for limiting the risk of overdosage. Riot control agents are not designed for use in confined spaces, but CS was nonetheless used in Vietnam to flush out the occupants of tunnels and bunkers. To spread the chemical agent, US soldiers used M7 tear gas grenades and the M106 "Mity Mite" sprayer, derived from civilian equipment for spraying pesticides on crops.[49] The soldiers using these weapons rarely knew the size of the underground system they were supposed to saturate with gas in order to dislodge the occupants, and the dosage was decided on by guesswork. Taking the lowest estimate of the lethal dosage of CS of 25,000 mg-min/m^3, Verwey calculated that this dosage was reached in under two minutes when an M7 tear gas grenade was launched into a 10 m^3 shelter, and in one minute when an M106 sprayer was used in a 200 m^3 tunnel.[50] Working in Vietnam from 1965 to 1967, Dr. Alje Vennema had one day to treat some twenty to thirty people who had been exposed to high concentrations of CS six to eighteen hours earlier. Half the patients died from pulmonary oedema attributed to CS poisoning.[51] The military

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41 E. G. Olajos and W. Stopford, above note 37, pp. 5–8.
42 W. D. Verwey, above note 2, p. 233.
43 C. Meyer, above note 33, p. 38.
44 W. D. Verwey, above note 2, p. 233.
45 Olivier Lepick, *La grande guerre chimique*, Presses Universitaires de France, Paris, 1998.
46 Sydney A. Katz and Harry Salem, "Synthesis and Chemical Analysis of Riot Control Agents", in E. G. Olajos and W. Stopford (eds), above note 37, p. 26.
47 W. D. Verwey, above note 2, p. 35.
48 K. Coleman, above note 27, p. 98.
49 W. D. Verwey, above note 2, p. 53.
50 *Ibid.*, p. 55.
51 *Ibid.*, p. 57; W. Stopford and F. R. Sidell, above note 38, pp. 213–214.

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use of these gases thus means that they can be categorized with the "asphyxiating" gases referred to by the Geneva Protocol, if one refers to the "ordinary meaning"[52] of the term "asphyxiating". Given that the oedema caused by these gases results in a "serious slowing or cessation of breathing which can result in death",[53] it is hard to see how they could not be characterized as "asphyxiating".

For their operations in Vietnam, US forces were not only issued with individual weapons (grenades and sprayers) for saturating underground shelters with riot control agents. CS was also loaded into 155 mm artillery shells such as the XM631 and fired from a howitzer with a 15 km range, and into bombs like the XM925 and dropped from a helicopter.[54] Such munitions let off huge concentrations of chemical agents. A single XM925 bomb releases on impact 36 kg of CS, and the four cylinders of an XM631 shell are each filled with 2.2 kg of CS. In the immediate vicinity of the point of impact, the lethal dosage is reached within one minute and the effects of the gas make all escape impossible.[55] Although used in the open air, the concentrations of CS produced by these weapons are on an altogether different scale from those released by the tear gas grenades used by police forces to disperse a crowd. It should be recalled that, under the CWC, in order not to be regarded as chemical weapons, the types and quantities of toxic chemicals intended for law enforcement purposes must be consistent with those purposes.[56] According to Walter Krutzsch and Ralf Trapp, this means that it is prohibited to fill artillery shells or bombs with riot control agents.[57] It is therefore particularly worrying that some fifteen States and arms manufacturers are continuing to develop weapons that can generate a high concentration of riot control agents.[58] According to Michael Crowley and Dana Perkins, in addition to the risk that such weapons will then be used unlawfully, whether for law enforcement purposes or in the conduct of hostilities, such weapons programmes may also be used to conceal schemes to develop chemical weapons.[59]

We have thus demonstrated that using riot control agents in military operations creates a context that is more likely to result in an overdosage of these agents in such proportions that they lose their non-lethal character. The same chemical, for instance CS, will not have the same effects if it is delivered using tear gas grenades or 155 mm shells. This same line of reasoning will lead us to relativize the harm caused by expanding bullets when they are used for law

52 Convention on the Law of Treaties, 1155 UNTS 354, 23 May 1969 (entered into force 27 January 1980), Art. 31(1).
53 Centre National des Ressources Textuelles et Lexicales, "Asphyxie", available at: www.cnrtl.fr/definition/asphyxie.
54 W. D. Verwey, above note 2, pp. 58–59.
55 Ibid., p. 60.
56 CWC, Art. II(1)(a).
57 W. Krutzsch and R. Trapp, above note 32, p. 42.
58 Michael Crowley and Dana Perkins, Beyond the Horizon: "Wide Area" Riot Control Agent Means of Delivery and their Relevance to the CWC, BWC and UNSCR 1540, Biochemical Security 2030 Project, University of Bath, 2014, pp. 7–13.
59 Ibid., pp. 3–4.

enforcement. Although designed to flatten and deform on impact, the bullets habitually used by police forces do not cause the same atrocious wounds as military bullets which have the same design but are prohibited.

Expanding bullets and wound ballistics

Expanding bullets appeared at the end of the nineteenth century and were prohibited by IHL very soon afterwards. In order to understand how these bullets can cause such serious injuries to the human body, some background knowledge of ballistics and the context in which they were banned is, in our view, indispensable. This will then enable us to explain why the use of expanding bullets for law enforcement purposes is justified.

The design and prohibition of expanding bullets

In the late nineteenth century, the British noted that their Lee-Metford rifle, which fired a .303 British cartridge, was relatively ineffective compared with earlier weapons. The bullet passed through the body of the first target it hit, leaving a fairly clean wound and often failing to do sufficient damage to put the adversary *hors de combat*. As rebellions spread in British India, the ammunition factory near Dum Dum, outside Calcutta, modified the .303 British bullets by cutting the hard metal jacket at the tip of the bullet, thus exposing the softer lead core so that it deformed on impact and pushed aside the flesh.[60] British colonial troops saw the carnage wrought by these modified bullets in the ranks of their adversaries during several campaigns to put down indigenous uprisings.[61] This change to the .303 British cartridge was retained in its later versions, which were also called "dum-dums".[62]

Some knowledge of ballistics is necessary to understand how expanding bullets work. Ballistics, the "science of projectiles and their behaviour", can be subdivided into internal ballistics, external ballistics and terminal ballistics.[63] The first studies the behaviour of the projectile in the gun barrel, the second during its flight, and the third – which interests us in particular here – when it hits its target. Terminal ballistics is called wound ballistics when the target is a living one.[64] One formula is common to all ballistics: $E_k = \frac{1}{2}mv^2$, where E_k is the kinetic energy of the projectile expressed in joules, m its mass in kilograms and v its velocity in metres per second. Thus, the kinetic energy of a projectile is equal to

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60 ICRC, *Weapons that may Cause Unnecessary Suffering or Have Indiscriminate Effects: Report on the Work of Experts*, Geneva, 1973, pp. 30–31, para. 80.
61 Robin M. Coupland and Dominique Loye, "The 1899 Hague Declaration concerning Expanding Bullets: A Treaty Effective for More than 100 Years Faces Complex Contemporary Issues", *International Review of the Red Cross*, Vol. 85, No. 849, 2003, p. 139.
62 Beat P. Kneubuehl (ed.), *Wound Ballistics: Basics and Applications*, Springer-Verlag, Berlin, 2011, p. 328.
63 Johan Warry and José Serrano, "Plaies balistiques", in Guy Magalon and Romain Vanwijck (eds), *Guide des plaies: Du pansement à la chirurgie*, John Libbey Eurotext, Montrouge, 2003, p. 129.
64 Marc Pirlot, André Chabotier, Fernand Demanet and Jean-Pol Beauthier, "Balistique lésionnelle", in Jean-Pol Beauthier (eds), *Traité de médecine légale*, De Boeck & Larcier, Brussels, 2008, p. 260.

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half its mass multiplied by its velocity squared: the heavier and faster a projectile, the more energy it carries.

Modern wound ballistics explains why the early versions of the .303 British cartridge were ineffective. The key factor in determining the capacity of a projectile to cause injury is not the total energy it carries when it hits its target, but how much of that energy it transfers to the target.[65] If its mass remains constant, the more a bullet decelerates as it passes through its target, the more kinetic energy it transmits. When a bullet is held up by living tissue, the transmission of energy from the bullet to the tissue causes temporary cavitation: the bullet violently thrusts aside the tissue in its track, opening a large cavity, which then narrows after a few milliseconds to leave only a smaller permanent cavity.[66] This phenomenon of temporary cavitation causes the destruction of the living tissue, which is very seriously damaged by the initial compression.[67] Some organs, such as the liver, are particularly sensitive to this.[68] Maximum destruction of the tissue is attained when the bullet does not pass through its target but remains lodged in the body: the projectile's entire kinetic energy is then used to inflict injury, and none is left for it to continue its trajectory.[69]

The first versions of the .303 British bullet retained their ogival form on impact and transferred only 20% of their kinetic energy as they travelled through the target. The dum-dum bullets flattened and "mushroomed" on impact. They were thus slowed down much more by the tissue in their track and deposited about 80% of their kinetic energy in the target's body. This resulted in very large temporary cavitation and atrocious wounds.

At the International Peace Conference held in The Hague from May to July 1899, the Swiss delegation, referring to the dum-dum bullets whose use in India was known in Europe, asked "whether it would not be well to prohibit projectiles which aggravate wounds and increase the sufferings of the wounded".[70] Declaration IV.3 concerning the prohibition of the use of bullets which expand or flatten easily in the human body, such as bullets with a hard envelope which does not entirely cover the core or is pierced with incisions, was adopted in plenary conference on 21 July 1899 by twenty-two votes in favour, two against (the United States and the United Kingdom), and one abstention (Portugal).[71]

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65 B. P. Kneubuehl (ed.), above note 62, pp. 9–10; Vincent J. M. Di Maio, *Gunshot Wounds. Practical Aspects of Firearms, Ballistics, and Forensic Techniques*, 2nd ed., CRC Press, Washington, DC, 1999, p. 171; Eric Prokosch, "The Swiss Draft Protocol on Small-Calibre Weapon Systems: Bringing the Dumdum Ban (1899) Up to Date", *International Review of the Red Cross*, No. 307, 1995, p. 412.

66 J. Warry and J. Serrano, above note 63, p. 130.

67 B. P. Kneubuehl (ed.), above note 62, p. 87.

68 M. Pirlot, A. Chabotier, F. Demanet and J. P. Beauthier, above note 64, p. 261.

69 V. J. M. Di Maio, above note 65, p. 58.

70 Netherlands Ministry of Foreign Affairs, above note 18, Part II, p. 332.

71 *Ibid.*, Part I, p. 87.

The importance of cartridge type

The use of expanding bullets by law enforcement forces is not considered illegal under international law[72] and, as stated in the introduction to this article, is common, even though the "elementary considerations of humanity" which led to the prohibition of these projectiles in armed conflicts should be "even more exacting in peace than in war".[73] However, although they remain "bullets which expand or flatten easily in the human body",[74] the expanding bullets used by the police are, in terms of the kinetic energy they carry, very different from the dum-dum bullets of the end of the nineteenth century and do not cause the same injuries.

The weapons used by police forces (pistols, revolvers and submachine guns) have cartridges that are fairly similar to each other in terms of the bullet's kinetic energy.[75] This energy is, however, much lower than that carried by a military rifle bullet.[76] For example, the modified .303 British bullet carried 3,136 joules energy on leaving the barrel, whereas the energy carried by a bullet from a 9×19 mm cartridge, which is used by many police forces, is only 490 joules on exit from the pistol barrel.[77]

Robin M. Coupland and Dominique Loye summarize the differences between these two types of ammunition as follows:

> The rifles that were being used at the end of the nineteenth century fired a bullet which delivers a maximum of approximately 3,000 joules energy. The ammunition for police handguns and machine pistols carry approximately 500 joules energy. … A bullet carrying 500 joules simply does not have the energy to cause a wound as large or as serious as one carrying 3,000 joules. … [I]f surgical care is available, the mortality from a 500 joule abdominal wound is in the order of 12%, whereas the mortality of 3,000 joule abdominal wounds is above 50% and may be nearer to 90%.[78]

In the work of expert groups convened by the ICRC, mortality rate has been widely accepted as one of the factors for determining the severity of "suffering" or "injury".[79] Beat P. Kneubuehl arrives at conclusions similar to those above, noting that handgun bullets carry on average four to six times less kinetic energy than the bullets of military rifles and stating that "one cannot compare handgun bullets with deforming rifle bullets".[80] The bullet of a 7.62×51 mm NATO cartridge has a

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72 Y. Dinstein, above note 15, p. 64.
73 ICJ, *Corfu*, above note 24, p. 22.
74 Hague Declaration, in Netherlands Ministry of Foreign Affairs, above note 18, Part I, Annexes, p. 262.
75 B. P. Kneubuehl (ed.), above note 62, pp. 44 and 61.
76 ICRC Customary Law Study, above note 8, p. 270.
77 B. P. Kneubuehl (ed.), above note 62, pp. 350–351.
78 R. M. Coupland and D. Loye, above note 61, pp. 140–141.
79 ICRC, above note 60, pp. 28–29, paras 68–72; ICRC, *Conference of Government Experts on the Use of Certain Conventional Weapons*, Report (Lucerne, 24 September–18 October 1974), Geneva, 1975, p. 8, para. 23; R. M. Coupland, *The SIrUS Project: Toward a Determination of Which Weapons Cause "Superfluous Injury or Unnecessary Suffering"*, ICRC, Geneva, 1997, p. 24.
80 B. P. Kneubuehl (ed.), above note 62, p. 103.

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kinetic energy of 3,272 joules on leaving the barrel, and is therefore quite similar to the old .303 British cartridge.[81] Although some military rifle cartridges developed in the twentieth century fire a bullet that delivers less than 3,000 joules, this has but limited impact on the distinction that can be made between rifle and handgun cartridges. Thus, 7.62×39 mm and 5.45×39 mm cartridges (used in different versions of the Kalashnikov) and 5.56×45 mm NATO cartridges (used in most assault rifles carried by NATO armies) all carry an energy greater than 1,400 joules on leaving the barrel.[82] On studying the ICRC's surgical database, Robin M. Coupland observed that in proper, but not optimal, conditions of treatment (with competent health personnel, but who gained access to the wounded only after a few hours), the mortality of an abdominal injury caused by a kinetic energy transfer of under 1,100 joules remained below 20%, but mortality increased very rapidly when the kinetic energy transfer exceeded this value, reaching 60% for a 1,400-joule wound and 80% for 1,500-joule wounds.[83]

This clear difference between the ammunition used by police forces and that prohibited at The Hague in 1899 is, in our view, the most convincing argument reconciling the prohibition under IHL with the practice of the police forces of the world. The expanding bullets used by law enforcement forces simply cannot cause the atrocious wounds which the plenipotentiaries at the First Peace Conference sought to prevent. These bullets, while they violate the letter of the Hague Declaration (they expand easily in the human body), respect its spirit (they do not cause the same atrocious wounds as dum-dum bullets). The hypothesis that bullets could be expanding but not cause superfluous injury was moreover put forward at the First Peace Conference by a member of the US delegation. In a plenary session held on 21 July 1899, Captain Crozier criticized the text of the Declaration, as he had done one month earlier within the Commission:[84] "[The Declaration] forbids bullets which expand. Now, it is quite possible that a bullet may be invented that expands uniformly and that consequently would not produce needlessly cruel wounds. It would not be necessary, then, to forbid its use."[85]

This position is still defended today by the US Law of War Manual. While it is not inconsistent with the different points made above, a problem arises when it is used to deny outright that the prohibition of expanding bullets is part of customary IHL,[86] even if this has so far only been done to justify the use of expanding bullets for handguns. Thus, in 2015, the Defense Department launched a competition to replace the pistol currently used by US troops with one capable of firing expanding bullets.[87] Certainly, since some expanding bullets do not cause

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81 *Ibid.*, p. 351.
82 *Ibid.*
83 R. M. Coupland, "Abdominal Wounds in War", *British Journal of Surgery*, No. 83, 1996, p. 1508, Fig. 4.
84 Netherlands Ministry of Foreign Affairs, above note 18, Part II, p. 278.
85 *Ibid.*, Part I, p. 83.
86 US Law of War Manual, above note 30, pp. 323–325.
87 Matthew Cox, "Army Begins MHS Competition to Find New Pistol and Ammo Supplier", *Military.com*, 2 September 2015, available at: www.military.com/daily-news/2015/09/02/army-begins-mhs-competition-to-find-new-pistol-and-ammo-supplier.html.

superfluous injury, and some non-expanding bullets, because they tumble inside the human body, cause wounds similar to those produced by dum-dum bullets,[88] the best solution *de lege ferenda* would be to ban different bullet types directly according to their effect on the human body. It was along these lines that, at the First Review Conference of the Convention on Certain Conventional Weapons, the Swiss delegation proposed adding a protocol prohibiting the use of bullets which, fired at ranges of 25 metres or more, transferred more than 20 joules of energy per centimetre to human tissues during the first 15 centimetres of passage into the body.[89] But *de lege lata*, the ban on using as a means of warfare bullets that carry a high kinetic energy and are designed to flatten or deform in the human body cannot be called into question in this way.

We have thus explained why the wounds caused by the bullets habitually used by police forces cannot be equated with those inflicted by the dum-dum bullets of the late nineteenth century. Because of the difference in kinetic energy, a 9×19 mm expanding bullet, for instance, is quite simply unlikely to cause the same destruction of tissue as a .303 British dum-dum bullet.

Although they may contain the same type of chemical agent or have a similar projectile design, riot control agents and expanding bullets often have differing effects on the human body depending on the context in which they are used. Riot control agents can become deadly much more easily in the conduct of hostilities than in a law enforcement context. Expanding bullets from handguns used by police forces for law enforcement purposes do not cause the same wounds as dum-dum bullets from military rifles. Now, having developed this first argument, we shall demonstrate that the different implications of the use of these weapons and ammunition depending on the context justify their difference in treatment under the rules on the conduct of hostilities and those governing law enforcement.

From the different implications to the scope of the ban

In this second part, we shall seek to complete the argument made in the first by demonstrating that, even if there were the same risk of an overdosage of riot control agents in the context of law enforcement, and even if police forces did use expanding bullets carrying higher kinetic energy to uphold public order, the use of riot control agents and expanding bullets raises different issues in the conduct of hostilities compared with law enforcement situations. The use of riot control agents in military operations against enemy combatants entails a risk of escalation to the use of chemical weapons designed to be lethal, and as for expanding bullets, their use in law enforcement must comply with conditions for the resort to lethal force that are much more restrictive than in the conduct of hostilities. For both these weapons and ammunition, we shall see that clarifying the implications of their use enables us to determine the scope of their

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88   R. M. Coupland and D. Loye, above note 61, p. 138.
89   For a detailed analysis of this proposal, see E. Prokosch, above note 65, pp. 411–426.

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prohibition in armed conflicts. Indeed, not all aspects of a belligerent's behaviour in an armed conflict are governed by the rules on the conduct of hostilities. As their name implies, these rules regulate only those hostile acts undertaken by a party to the conflict in order to fight the adversary.[90]

Riot control agents and escalation

The dangerous use of riot control agents has occurred not only during the conduct of hostilities in armed conflict. Riot control agents have also been deployed in confined spaces for law enforcement purposes, in particular to suppress prison riots. At least six deaths following exposure to CN in enclosed environments have been documented since the 1950s.[91] More recently, in August 2013, thirty-seven Egyptian Muslim Brotherhood supporters or members died of asphyxiation after security forces fired tear gas into the van they were in.[92] We shall demonstrate that the use of riot control agents as a method of warfare entails a specific risk that does not exist when they are used for law enforcement purposes, even in the case of an overdosage: the risk of escalation to the use of chemical agents designed to be lethal. This explanation will then enable us to clarify the boundary between permitted and prohibited uses of this weapon in armed conflicts.

The risk of escalation

Already in 1977, Verwey had justified the ban on using riot control agents as a method of warfare by the risk of escalation involved. He differentiated between the danger of one-sided escalation[93] and two-sided escalation.[94]

One-sided escalation occurs when one party to the conflict, after using riot control agents as a means of combat, decides to take the plunge and deploy other chemical weapons. Riot control agents are "threshold weapons": once they have been used, a barrier falls and it is easier to use chemical weapons designed to be lethal.[95] This risk of escalation can also be linked to the risk of overdosage. The threshold is all the more easily crossed if the use of riot control agents, supposedly non-lethal, has caused enemy deaths.[96] The distinction between non-lethal and lethal chemical weapons is then erased, and they are all regarded as "gases" without further specification. This pattern of escalation occurred in a number of armed conflicts during the twentieth century: during the invasion of Ethiopia by the Italian army in 1935 and 1936, the Japanese invasion of China in

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90 Nils Melzer, *Targeted Killing in International Law*, Oxford University Press, Oxford, 2008, pp. 269–278.
91 W. Stopford and F. R. Sidell, above note 38, pp. 204–205.
92 "Egypt Police Convicted over Detainee Tear-Gas Deaths", *BBC.com*, 18 March 2014, available at: www.bbc.com/news/world-middle-east-26626367.
93 W. D. Verwey, above note 2, pp. 161–190.
94 *Ibid.*, pp. 191–198.
95 Benjamin Kastan, "The Chemical Weapons Convention and Riot Control Agents: Advantages of a 'Method' Approach to Arms Control", *Duke Journal of Comparative and International Law*, Vol. 22, No. 2, 2012, p. 268.
96 W. D. Verwey, above note 2, p. 165.

1937, the United Arab Emirates' intervention in the Yemeni civil war from 1962 to 1967,[97] and the 1980–88 Iran–Iraq war.[98] In each case, the deployment of chemicals designed to be lethal, such as yperite or sarin, was preceded by the use of irritant gases.

It was the danger of two-sided escalation that spurred the ban on the use of riot control agents as a method of warfare, according to the ICRC Customary Law Study.[99] This line of reasoning is found in the 1993 law of armed conflict manual of the Netherlands land forces:

> It is said, with regard to tear gas, that it should be prohibited in armed conflicts. It can be used to control order. This should be distinguished from the use in armed conflict because there it runs the danger of provoking the use of other more dangerous chemicals.[100]

The updated version of the manual, from 2005, expands on this argument:

> Riot control agents such as tear gas may not be used as a method of warfare …. Use as a means of maintaining order, including the control of internal unrest, is not prohibited. Military use must be distinguished from this. This conceals the danger that the use of a relatively harmless chemical may unleash the use of some other, more lethal one by the adversary.[101]
>
> … [M]ilitary use of a non-lethal weapon may pose the danger that the adversary perceives it as a forbidden means, which may induce the adversary to use other, more lethal means. One example is the use of tear gas, mentioned above.[102]

Two-sided escalation would thus occur when one party to a conflict uses chemical weapons designed to be lethal in retaliation for an attack against them by another party using riot control agents. The two adversaries may then blame each other for the decisive attack that introduced the use of chemical weapons into the conflict.[103] The first belligerent will consider that his initial attack using riot control agents was not strictly speaking a chemical attack as these agents cause only temporary incapacitation. The second belligerent, meanwhile, will deem that he was attacked using combat gases, without waiting to find out whether they were riot control or other chemical agents, and will decide to use chemical weapons in retaliation. According to some sources, the use of chemical weapons

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97 *Ibid.*, pp. 182–184; "'Non-Lethal' Weapons, the CWC and the BWC", *CBW Conventions Bulletin*, No. 61, 2003, p. 2.

98 *Ibid.*, p. 2; B. Kastan, above note 95, p. 274.

99 ICRC Customary Law Study, above note 8, p. 265.

100 Dutch Ministry of Defence, *Toepassing Humanitair Oorlogsrecht*, Voorschrift No. 27-412/1, 1993, p. IV-6–IV-8, para. 14, quoted in Jean-Marie Henckaerts and Louise Doswald-Beck (eds), *Customary International Humanitarian Law*, Vol. 2: *Practice – Part 1*, Cambridge, Cambridge University Press, 2005, pp. 1744–1745, para. 540.

101 Dutch Military Legal Service, *Humanitair Oorlogsrecht: Handleiding*, Voorschrift No. 27-412, 2005, para. 0456, quoted in the updated online version of the ICRC Customary Law Study, available at: www.icrc.org/customary-ihl/eng/docs/v2_rul_rule75#_IIMiMa.

102 *Ibid.*, para. 0477.

103 W. D. Verwey, above note 2, p. 191.

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during the First World War began not with the use of chlorine by German troops at Ypres in April 1915, but with the use of tear gas, in particular CN, by French troops as early as August 1914.[104] This attack apparently induced the German General Staff in its turn to accept the proposal of the companies Krupp and IG Farben to use chemical weapons as a method of warfare.[105] The right to retaliate in armed conflicts has evolved since the First World War, particularly as regards chemical reprisals. In 2005, the ICRC Customary Law Study noted increasing evidence that such retaliation may well be prohibited under customary law.[106] The ban on the use of riot control agents as a method of warfare can thus be seen as an additional safety mechanism aimed at forestalling a vicious circle of reprisals. In advance of a ban on chemical retaliation, it prevents the conditions from arising in which a conflict party would be tempted to resort to such an action.

Here too, the risk of escalation can be linked to the risk of overdosage. Already in 1977, Verwey had pointed out that the symptoms of exposure to very high doses of riot control agents and low doses of neurotoxic agents can be similar.[107] A chemical attack with high doses of riot control agents may therefore resemble an attack using neurotoxicants and, as Richard Price[108] summed up in an interview in 2013, "the idea is, if you're in the battlefield you're not going to sit around testing what kind of gas it is".[109] The conflicting information about what was perhaps the first chemical attack of the Syrian civil war is rather symptomatic. On 15 January 2013, a secret cable from the US State Department leaked to the public stated that, in Homs on 23 December 2012, Syrian regime forces had used the chemical agent BZ (quinuclidinyl benzilate), a hallucinogen which is included among the "toxic chemicals" listed in Part A of Schedule 2 of the Annex on Chemicals of the CWC.[110] The following day, the US administration denied this, declaring that the substance used was a riot control agent.[111]

This risk of escalation does not exist in the context of law enforcement. As regards one-sided escalation, police forces are not supposed to possess the usual vectors for lethal chemical weapons such as artillery or bomber aircraft. Moreover, whenever a chemical weapon designed to be lethal has been used by

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104 Ibid., p. 165; Daniel P. Jones, "From Military to Civilian Technology: The Introduction of Tear Gas for Civil Riot Control", Technology and Culture, Vol. 19, No. 2, 1978, p. 152.

105 W. D. Verwey, above note 2, pp. 195–196.

106 ICRC Customary Law Study, above note 8, pp. 260–261.

107 W. D. Verwey, above note 2, p. 166.

108 Richard Price is a political scientist who specializes in how the taboo against chemical weapons was built. He is the author of "A Genealogy of the Chemical Weapons Taboo", International Organization, Vol. 49, No. 1, 1995; and A Chemical Weapons Taboo, Cornell University Press, Ithaca, NY, 1999.

109 Ezra Klein, "'They Must Be Really Bad if Even Hitler Wouldn't Use Them'", Washingtonpost.com, 3 September 2013, available at: www.washingtonpost.com/blogs/wonkblog/wp/2013/09/03/they-must-be-really-bad-if-even-hitler-wouldnt-use-them/.

110 Josh Rogin, "Exclusive: Secret State Department Cable: Chemical Weapon Used in Syria", Thecable.foreignpolicy.com, 15 January 2013, available at: http://thecable.foreignpolicy.com/posts/2013/01/15/secret_state_department_cable_chemical_weapons_used_in_syria.

111 Elise Labott, "U.S.: Syria Didn't Use Chemical Weapons in Homs Incident", Security.blogs.cnn.com, 16 January 2013, available at: http://security.blogs.cnn.com/2013/01/16/u-s-syria-didnt-use-chemical-weapons-in-homs-incident/.

State agents, this has always been, to our knowledge, during an armed conflict. As for the risk of two-sided escalation, it seems highly unlikely that rioters whom police forces are trying to disperse using riot control agents could strike back with chemical agents designed to be lethal.

Limits on the use of riot control agents in situations of armed conflict

The CWC does not prohibit the use of riot control agents in armed conflicts in general, but only as a "method of warfare"[112] – that is, during the conduct of hostilities. They may, however, be used for "law enforcement",[113] even during an armed conflict. Determining the boundary between the use of riot control agents as a "method of warfare" and for "law enforcement" has given rise to much debate, particularly as regards official US doctrine on the subject.

When, in 1975, the United States unilaterally renounced first use of riot control agents by Executive Order 11850, signed by President Gerald Ford, it specified that four uses of these agents were nonetheless still permitted in armed conflict:

(a) Use of riot control agents in riot control situations in areas under direct and distinct U.S military control, to include controlling rioting prisoners of war.
(b) Use of riot control agents in situations in which civilians are used to mask or screen attacks and civilian casualties can be reduced or avoided.
(c) Use of riot control agents in rescue missions in remotely isolated areas, of downed aircrews and passengers, and escaping prisoners.
(d) Use of riot control agents in rear echelon areas outside the zone of immediate combat to protect convoys from civil disturbances, terrorists and paramilitary organizations.[114]

The content of Executive Order 11850 was not modified by the entry into force for the United States of the CWC.[115] The Senate had made this a condition for ratification.[116] The same provisions are found unchanged in the US Law of War Manual of June 2015.[117]

According to David P. Fidler, the uses given in subparagraph (a) of Executive Order 11850 are lawful under the CWC,[118] and we share his analysis. As regards areas under direct US military control, let us remember that in situations of international armed conflict, for example, an occupying power is

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112 CWC, Art. I(5).
113 *Ibid.*, Art. II(9)(e).
114 Executive Order 11850, "Renunciation of Certain Uses in War of Chemical Herbicides and Riot Control Agents", 8 April 1975.
115 K. Boyd, above note 29.
116 "Senate Executive Resolution 75 relative to the Chemical Weapons Convention", *Congressional Record*, Vol. 143, No. 46, 17 April 1997, available at: www.gpo.gov/fdsys/pkg/CREC-1997-04-17/html/CREC-1997-04-17-pt1-PgS3373.htm.
117 US Law of War Manual, above note 30, pp. 390–391.
118 David P. Fidler, "The Meaning of Moscow: 'Non-Lethal' Weapons and International Law in the Early 21st Century", *International Review of the Red Cross*, Vol. 87, No. 859, 2005, p. 546.

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responsible for ensuring public order in the occupied territory.[119] According to David P. Fidler, this responsibility goes hand in hand with permission to employ usual law enforcement means, including riot control agents.[120] The opinion that these can be used to put down riots in prisoner-of-war camps is also widely reflected in legal doctrine.[121] Indeed, the relationship between a belligerent and civilians in a territory that it is occupying, or enemy combatants after their surrender or capture, does not fall under the conduct of hostilities (a prisoner of war may therefore be prosecuted criminally for murdering one of his guards, for instance[122]). The use of riot control agents against such individuals is therefore unlikely to be perceived by another belligerent as a use of "combat gases".

The uses of riot control agents provided for in subparagraphs (b) and (c) are much more problematic. An operation aimed at targeting an adversary hiding within the civilian population (subparagraph (b)), preventing an adversary from capturing a downed aircrew or recapturing an escaping prisoner (subparagraph (c)) clearly constitutes military action directed against the forces of the opposing party and therefore falls within the conduct of hostilities. In such contexts, an attack using riot control agents creates precisely those conditions in which, to quote Richard Price, the combatants targeted will not "sit around testing what kind of gas it is"[123] but will take very seriously the possibility that they may have been attacked with combat gases, which obviously risks triggering two-sided escalation. It is worth noting that when the United States ratified the CWC, the Clinton administration and the Senate were aware of the incompatibility of subparagraphs (b) and (c) of Executive Order 11850 with the new Convention that the United States was about to ratify. This did not prevent President Bill Clinton from assuring the Senate that the entry into force of the CWC for the United States would involve no modification of Executive Order 11850.[124] However, the fact that the United States has national legislation (Executive Order 11850) authorizing behaviour that is prohibited by an international treaty it has ratified (the CWC) does not make this behaviour lawful as a result. Under Article 3 of the International Law Commission's Draft Articles on Responsibility of States for Internationally Wrongful Acts, "[t]he characterization of an act of a State as internationally wrongful is governed by international law. Such

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119 Regulations respecting the Laws and Customs of War on Land, annexed to the Convention respecting the Laws and Customs of War on Land, 29 July 1899 (entered into force 4 September 1900), Art. 43, in Netherlands Ministry of Foreign Affairs, above note 18, Part I, Annexes, p. 260; Geneva Convention (IV) relative to the Protection of Civilian Persons in Time of War of 12 August 1949, 75 UNTS 287 (entered into force 21 October 1950), Arts 64–78.
120 D. P. Fidler, above note 118, p. 544.
121 W. Krutzsch and R. Trapp, above note 32, pp. 42–43; Y. Dinstein, above note 15, p. 76; D. P. Fidler, above note 118, p. 544.
122 Geneva Convention (III) relative to the Treatment of Prisoners of War of 12 August 1949, 75 UNTS 135 (entered into force 21 October 1950), Art. 93.
123 E. Klein, above note 109.
124 US Law of War Manual, above note 30, pp. 1172–1173.

characterization is not affected by the characterization of the same act as lawful by internal law."[125]

As regards subparagraph (d), the protection of a convoy cannot be regarded in the same way if it is held up by an angry mob (civil disturbance) or ambushed by an organized paramilitary group. In the first case, dispersing the crowd is indeed a matter of law enforcement. In the second case, defending the convoy falls within the conduct of hostilities, and any weapon used to this end becomes a "method of warfare". Part of subparagraph (c) contains the same ambiguity: if the crew of a downed aircraft were threatened by an angry mob rather than the troops of an opposing party, the rules of law enforcement would apply and the use of riot control agents would be lawful.[126]

One may thus question the authorization given by President George W. Bush to US troops in Iraq in April 2003 to use riot control agents in the circumstances set out in Executive Order 11850.[127] If the troops had deployed riot control agents against the regular Iraqi army or militias backing it, this would have constituted a violation of the CWC, and the United States could not have denied the risk of two-sided escalation, especially seeing the vehemence with which, two months earlier, Secretary of State Colin Powell had sought to convince the members of the Security Council that Iraq possessed chemical weapons.[128]

Thus, by examining the risk of escalation when riot control agents are used as a method of warfare, we have been able to explain why these weapons, the use of which is permitted for law enforcement purposes, could not be used against enemy combatants in an armed conflict. This has also enabled us to determine the boundary between permitted and prohibited uses of these weapons and thus to challenge the provisions of US domestic law on the subject. We shall now do the same for expanding bullets. A study of the different issues raised by their use according to the context will also help us to clarify the boundary between authorized and prohibited uses.

Expanding bullets and the use of lethal force

The difference in the kinetic energy of, and therefore in the severity of injuries caused by, expanding bullets is the argument most frequently put forward to justify why these bullets are treated differently in the rules on the conduct of hostilities and the rules of law enforcement. This is only valid, though, when

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125 International Law Commission, Draft Articles on Responsibility of States for Internationally Wrongful Acts, UN Doc. A/CN.4/SER.A/2001/Add.1, *Yearbook of the International Law Commission*, Vol. 2, No. 2, 2001, p. 26.
126 Kenneth Watkins, "Chemical Agents and 'Expanding' Bullets: Limited Law Enforcement Exception or Unwarranted Handcuffs?", in Anthony M. Helm (ed.), *International Law Studies*, Vol. 82: *The Law of War in the 21st Century: Weaponry and the Use of Force*, US Naval War College, Newport, RI, 2006, p. 206.
127 Kerry Boyd, "Military Authorized to Use Riot Control Agents in Iraq", *Arms Control Today*, April 2003, available at: www.armscontrol.org/act/2003_05/nonlethal_may03.
128 United Nations Security Council, Official Transcript of 4701st Meeting, UN Doc. S/PV.4701, 5 February 2003, pp. 2–20.

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police forces use expanding bullets for their standard-issue handguns. Expanding bullets are however sometimes fired from military rifles to ensure public order in some situations where the police forces' usual equipment is not enough. For example, on 26 March 2000, Ewald K., armed and barricaded in his apartment after seriously wounding a policeman, was killed by an expanding bullet fired from a military rifle by a Swiss police sniper.[129] The use of expanding bullets, even for military rifles, is nonetheless justified given the existence of conditions that limit the use of lethal force under the rules of law enforcement. This argument can also be used to determine in which conditions expanding bullets can be used in contexts of armed conflict.

The conditions for using lethal force

Much of the literature on the subject sees two practical reasons for the use of expanding bullets by police forces. First, they maximize the chances that, once hit, the suspect will be put out of action and instantly prevented from firing back. Second, they minimize the risk that the bullet will pass through the body of the suspect and wound or kill a bystander.[130] This benefit can also be of interest in the conduct of hostilities, especially in areas where combatants and civilians are intermingled. The difference in treatment between the rules on the conduct of hostilities and the rules of law enforcement is thus justified by the different implications under these two branches of law.

According to Nils Melzer, one possible, albeit imperfect explanation is that there is a higher tolerance of "collateral damage" during the conduct of hostilities than in law enforcement operations.[131] The law of armed conflict does not seem to authorize reducing the risk of collateral damage at the cost of inflicting more serious injuries on combatants. The idea, advocated by some,[132] that the principle of distinction could take precedence over the prohibition against superfluous injury is, in our view, not compatible with the spirit of IHL. The ICJ referred to these two principles in its Advisory Opinion on the *Legality of the Threat or Use of Nuclear Weapons*. While it cites the principle of distinction before the prohibition against causing unnecessary suffering, it calls them both "cardinal principles" and does not seem to establish a hierarchy between them.[133] Similarly, Articles 35 and 48 of Additional Protocol I, respectively on the prohibition against causing superfluous injury or unnecessary suffering and the principle of distinction, both bear the title "basic rule".[134]

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129 N. Melzer, above note 90, pp. 229–230.
130 R. M. Coupland and D. Loye, above note 61, p. 141; ICRC Customary Law Study, above note 8, p. 270; N. Melzer, above note 90, pp. 377 and 416.
131 *Ibid.*, pp. 377–378, 416.
132 William H. Boothby, *Weapons and the Law of Armed Conflict*, Oxford University Press, Oxford, 2009, p. 146.
133 ICJ, *Nuclear Weapons*, above note 22, p. 257, para. 78.
134 Protocol Additional (I) to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts, 1125 UNTS 272, 8 June 1977 (entered into force 7 December 1978) (AP I), Arts 35, 48. In the French text of the Protocol, the expression "règle fondamentale" is literally

The other, complementary explanation is that the absence of a ban on the use of expanding bullets for law enforcement purposes is compensated for by much more restrictive conditions regulating the use of force. The rules on the conduct of hostilities contain a "positive freedom to use force", provided that those targeted are combatants or civilians taking a direct part in hostilities.[135] Indeed, under this body of law, according to Marco Sassòli and Laura M. Olson, "attacks against combatants are not subject to a proportionality assessment of the harm inflicted on the combatant and the military advantage derived from the attack".[136] By contrast, in the field of law enforcement, under the Basic Principles on the Use of Force and Firearms by Law Enforcement Officials,[137] in particular Principle 9, "intentional lethal use of firearms may only be made when strictly unavoidable in order to protect life". There is thus a huge difference between the two bodies of rules as regards the use of lethal force:

> While it is generally accepted under international humanitarian law that enemy combatants may be targeted in an international armed conflict until they surrender or are otherwise hors de combat, regardless of whether they constitute an immediate threat to human life, international human rights law limits the admissibility of deadly force to such circumstances.[138]

Thus, the lack of a ban on the use of expanding bullets for law enforcement purposes can be justified both by a greater tendency by this body of law to allow more serious injury to the person targeted in order to limit collateral damage and by significantly more restrictive conditions for the use of force.

The conditions for the use of expanding bullets in armed conflict: A question of lex specialis

The ICJ has consistently held that, in situations of armed conflict, both international humanitarian law and international human rights law apply.[139] In recent years, the ICRC has taken a special interest in the interplay between these two branches of law in contexts of armed conflict when it comes to determining the conditions for the

closer to "fundamental rule" than "basic rule". The English and French texts of the Protocol are equally authentic according to Article 102.

135 Dale Stephens, "Military Involvement in Law Enforcement", *International Review of the Red Cross*, Vol. 92, No. 878, 2010, p. 463.

136 Marco Sassòli and Laura M. Olson, "The Relationship between International Humanitarian and Human Rights Law Where It Matters: Admissible Killings and Internment of Fighters in Non-International Armed Conflicts", *International Review of the Red Cross*, Vol. 90, No. 871, 2008, p. 606.

137 Basic Principles on the Use of Force and Firearms by Law Enforcement Officials, adopted by the 8th United Nations Congress on the Prevention of Crime and the Treatment of Offenders, Havana, 27 August–7 September 1990, cited by European Court of Human Rights (ECtHR), *McCann and Others v. United Kingdom*, Application No. 18984/91, Judgment (Grand Chamber), 27 September 1995, para. 139.

138 Office of the United Nations High Commissioner for Human Rights (OHCHR), *International Legal Protection of Human Rights in Armed Conflict*, UN Doc. HR/PUB/11/01, 2011, p. 64.

139 ICJ, *Nuclear Weapons*, above note 22, p. 240, para. 25; ICJ, *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory*, Advisory Opinion, 9 July 2004, *ICJ Reports 2004*, p. 178, para. 106.

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use of lethal force by a State agent against an individual.[140] However, the question of the use of expanding bullets has been dealt with only very briefly.[141] As explained above, the two branches of law lead to radically different conclusions on the matter, meaning that a choice must be made, as they cannot be applied jointly. In most situations involving the use of lethal force by a State agent, it is fairly easy to determine whether the rules on the conduct of hostilities, which are a branch of IHL,[142] should apply, or rather the rules of law enforcement, which may fall under both international human rights law and IHL (in particular in situations of occupation). Regarding the use of expanding bullets, the US Law of War Manual states: "The US armed forces have used expanding bullets in various counterterrorism and hostage rescue operations, some of which have been conducted in the context of armed conflict."[143]

In the case of a hostage-taking which occurs in a context of armed conflict but is unrelated to it (the hostage-takers have no link with any of the parties to the conflict), it is clear that international law pertaining to law enforcement (in particular the provisions concerning the use of lethal force) would apply to an operation to release the hostages, whether carried out by the army or the police. The use of expanding bullets would not be prohibited here. As summarized by Eric David, "in an international or non-international armed conflict, the law of armed conflict applies in principle only within the framework of conflictual relations between the belligerents".[144] But what if the hostage-takers are members of the forces of one of the parties to the conflict? Should those tasked with freeing the hostages treat it as a police operation governed by the rules of law enforcement or as a combat operation regulated by the law of the conduct of hostilities? The principle of "*lex specialis derogat legi generali*" provides an answer to this question.

According to the Office of the High Commissioner for Human Rights, this principle "reflects a widely accepted maxim of legal interpretation and technique for the resolution of normative conflicts".[145] The International Law Commission adds:

> For the lex specialis principle to apply it is not enough that the same subject matter is dealt with by two provisions; there must be some actual inconsistency between them, or else a discernible intention that one provision is to exclude the other.[146]

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140 ICRC, *Report on International Humanitarian Law and the Challenges of Contemporary Armed Conflicts*, ICRC Doc. 31IC/11/5.1.2, Geneva, October 2011, pp. 18–20; Gloria Gaggioli (ed.), *Expert Meeting on the Use of Force in Armed Conflicts: Interplay between the Conduct of Hostilities and Law Enforcement Paradigms*, ICRC, Geneva, 2013; ICRC, *Report on International Humanitarian Law and the Challenges of Contemporary Armed Conflicts*, ICRC Doc. 32IC/15/11, Geneva, October 2015, pp. 33–37.
141 G. Gaggioli (ed.), above note 140, pp. 28–29.
142 N. Melzer, above note 90, p. 269.
143 US Law of War Manual, above note 30, p. 323.
144 E. David, above note 16, p. 217, para. 1176.
145 OHCHR, above note 138, p. 59.
146 International Law Commission, above note 125, p. 140.

In accordance with this principle, the specific rule takes precedence over the general – indeed, it is closer to the specific legal issue at hand and takes better account of the particular features of the context.[147] The International Law Commission advises on how to apply the principle:

> A weighing of different considerations must take place and if that weighing is to be something else than the expression of a preference, then it must seek reference from what may be argued as the systemic objectives of the law, providing its interpretative basis and *milieu*.[148]

This consideration of the systemic objectives opens the door to a teleological criterion in determining the *lex specialis*.[149]

The law on the conduct of hostilities and the rules of law enforcement have the task of balancing very different parameters, as illustrated by their respective principles of proportionality. In the law of the conduct of hostilities, the principle of proportionality weighs the anticipated military advantage of an attack against the incidental loss of civilian lives that the attack might cause. In the field of law enforcement, the proportionality principle requires a balancing between the risks posed by the individual who is to be neutralized versus the potential harm caused by this neutralization to the individual and to any bystanders.[150] The law of the conduct of hostilities is thus designed to impose certain limits on operations that are aimed at obtaining a military advantage, while the rules of law enforcement are intended to regulate situations in which the use of lethal force against an individual is necessary in order to protect others. This is why we support Nils Melzer's argument that, in the context of a hostage release operation, even if the operation opposes two adverse parties to an armed conflict, it is the "law enforcement paradigm" that must apply, in that the main goal of the operation is the release of the hostages and not the pursuit of a military advantage.[151] In this situation, expanding bullets could therefore be used, but the use of lethal force would be limited as laid down in the rules of law enforcement.

Another point in favour of this solution is that, although the two bodies of rules aim to limit the loss of human life, the rules on the conduct of hostilities are not suited to operations whose goal is saving civilian lives. The principle of distinction[152] prohibits the targeting of civilians, and thus the rules on the conduct of hostilities are not designed to regulate operations whose primary purpose is to defend civilians against an adversary seeking to harm them. The principle of proportionality in an attack sees the preservation of civilian lives not as the objective of a military

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147 M. Sassòli and L. M. Olson, above note 136, p. 603.
148 Martti Koskenniemi, *Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law*, Report of the Study Group of the International Law Commission, UN Doc. A/CN.4/L.682, 13 April 2006, p. 59, para. 107.
149 M. Sassòli and L. M. Olson, above note 136, p. 604.
150 G. Gaggioli (ed.), above note 140, pp. 8–9.
151 N. Melzer, above note 90, p. 376.
152 AP I, Art. 48; Protocol Additional (II) to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-international Armed Conflicts, 1125 UNTS 650 8 June 1977 (entered into force 7 December 1978), Art. 13(2); ICRC Customary Law Study, above note 8, Rule 1, pp. 3–8.

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operation but rather as a constraint that limits the means for achieving a given military objective.[153] From the perspective of the rules on the conduct of hostilities, the military objective during a hostage release operation is not saving the hostages' lives but putting the hostage-takers *hors de combat*. Moreover, while the principle of precautions in attack establishes an obligation to refrain from an attack in certain situations,[154] no rule on the conduct of hostilities makes an attack obligatory in certain circumstances. Thus, in cases where hostage-takers threaten to kill their captives if their demands are not met, the law of the conduct of hostilities would only balance putting the hostage-takers *hors de combat* against the losses that an attack could cause among the hostages, without taking into account the cost of inaction – that is, the risk that all the hostages would be executed. By contrast, the rules of law enforcement must be interpreted in light of the idea that States have a positive obligation to protect the lives of people under their jurisdiction against the actions of third parties.[155] In this paradigm, the risk that the lack of an attack on the hostage-takers would entail for the lives of the hostages would be factored into the calculation of proportionality.[156] Since the rules of law enforcement provide the most suitable framework for the choices that have to be made by State agents tasked with preventing an attack on civilians, such as hostage-taking, it is these which must be applied as the *lex specialis*.

In theory, this reasoning could be extended to all situations in which armed forces are deployed in an armed conflict to protect civilians, but in practice this would be problematic. It is only in planned operations such as a hostage release that it can be determined while equipping the soldiers whether they will be acting within the framework of the rules on the conduct of hostilities or of law enforcement. By contrast, a soldier deployed by an occupying power in an occupied territory, for example, will have the dual task of keeping the territory under occupation and of upholding public order there, in line with the occupying power's obligations.[157] This soldier could consequently be confronted with a multitude of different situations of violence[158] regulated by different legal frameworks. If he is attacked by resistance forces seeking to end the occupation, he will have to defend himself according to the rules on the conduct of hostilities. But if he witnesses an attack against civilians, he should apply the rules of law enforcement in order to defend them. To be effective in preventing violations of the law of armed conflict, the rules of engagement given to troops must be kept relatively simple and comprehensible

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153 AP I, Art. 51(5)(b); ICRC Customary Law Study, above note 8, Rule 14, pp. 46–50.

154 AP I, Art. 57(2)(b); ICRC Customary Law Study, above note 8, Rule 19, pp. 60–62.

155 ECtHR, *L.B.C. v. The United Kingdom*, Application No. 23413/94, Judgment, 9 June 1998, para. 36; Human Rights Committee, *General Comment No. 31: The Nature of the General Legal Obligation Imposed on States Parties to the Covenant*, UN Doc. CCPR/C/21/Rev.1/Add.13, 29 March 2004, p. 4, para. 8; OHCHR, above note 138, pp. 18–19.

156 ECtHR, *Finogenov and Others v. Russia*, Application Nos 18299/03 and 27311/03, Judgment (First Section), 20 December 2011, para. 226.

157 Regulations concerning the Laws and Customs of War on Land, annexed to Convention (IV) respecting the Laws and Customs of War on Land, 18 October 1807 (entered into force 26 January 1910), Art. 43.

158 K. Watkins, above note 126, pp. 202–204; Kenneth Watkins, "Use of Force during Occupation: Law Enforcement and Conduct of Hostilities", *International Review of the Red Cross*, Vol. 94, No. 885, 2012, pp. 279–283.

to all.[159] Issuing a soldier with both conventional bullets and expanding bullets for his assault rifle while instructing him that the latter can be used only to defend civilians, and only within the limits imposed by the rules of law enforcement, but not to defend himself if he finds himself in the context of the conduct of hostilities, seems extremely complex. This is why giving expanding bullets to troops that might have to carry out law enforcement operations but for whom this is not the only task is, in our view, not feasible without increasing the risks that this ammunition will also be used unlawfully. The use of such ammunition should therefore be limited to planned special operations aimed at protecting civilians in imminent danger, a typical example of which is the release of hostages.

Thus, by identifying the line of reasoning that reconciles the use of expanding bullets by law enforcement forces with their prohibition in the conduct of hostilities, we have managed to clarify the scope of their prohibition in situations of armed conflict. Such bullets can be used only in operations whose primary goal is protecting civilians rather than obtaining a military advantage, and their use should be restricted in accordance with the rules of law enforcement – that is, by limiting the use of lethal force to that strictly necessary to save innocent lives.

We have responded to the criticisms regarding the different treatment of riot control agents and expanding bullets under the rules of law enforcement and the rules on the conduct of hostilities by exposing the different issues raised by their prohibition and authorization depending on the circumstances. True to the maxim "*ratio legis est anima legis*", elucidating the reasons behind this difference in treatment has also enabled us to clarify the boundary between authorized and prohibited uses of these weapons and ammunition.

Conclusion

We have drawn on two complementary arguments to justify the use of riot control agents and expanding bullets for law enforcement purposes though they are prohibited in the conduct of hostilities. With the first, we demonstrated that the effects of these weapons and ammunition on the human body vary greatly depending on the situation in which they are used, which justifies the difference in treatment under the rules on the conduct of hostilities and the rules of law enforcement. The second argument, focusing on the different issues raised by the use of these weapons and ammunition depending on the context, reinforced the conclusions of the first. This led us to examine how the rules of law enforcement apply in situations of armed conflict and to elucidate their relationship with the rules on the conduct of hostilities. Doing so helped us to clarify the boundary between authorized and prohibited uses of these weapons and ammunition. This boundary, which is based on a coherent interpretation of the law, should in our view not be moved as some would wish, either in a more permissive or a more restrictive direction.

159 *NATO Legal Deskbook*, 2nd ed., 2010, p. 261.

DEBATE

It's not about the gender binary, it's about the gender hierarchy: A reply to "Letting Go of the Gender Binary"

Jeanne Ward

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The "Debate" section of the Review *aims to contribute to the reflection on current ethical, legal, or operational controversies around humanitarian issues.*

In its issue on "Sexual Violence in Armed Conflict" *(Vol. 96, No. 894, 2014), the* Review *published an Opinion Note by Chris Dolan entitled "Letting Go of the Gender Binary: Charting New Pathways for Humanitarian Interventions on Gender-Based Violence". In light of the review process for the Inter-Agency Standing Committee's* Guidelines for Integrating Gender-Based Violence Interventions in Humanitarian Action *(GBV Guidelines), Dolan argues for a shift in the conceptualization of gender-based violence (GBV) in humanitarian settings from an emphasis on gender equality to an ethos of gender inclusivity. This, he*

suggests, is essential to improving the situation of victims, furthering social justice and changing agendas.

In this issue, the Review *presents the view of Jeanne Ward, one of the lead authors of the revised GBV Guidelines. For Ward, attempts to shift away from a focus on gender equality in GBV programming represent a regression rather than an advancement for the GBV field, as a dedicated spotlight on the rights and needs of women and girls continues to be hard-won in humanitarian contexts. Instead, she suggests retaining a focus on women and girls in GBV work, while moving forward in partnership with those who wish to accelerate programming directed to men and LGBTI communities broadly.*

Keywords: violence against women and girls, women's rights, GBV, gender equality, gender inclusivity, humanitarian response, IASC, LGBTI.

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Introduction

Despite the long and evident history of atrocities against females in humanitarian emergencies, a focus on violence against women and girls in humanitarian action is relatively new, with programming only scaling up from the late 1990s.[1] Since then, considerable progress has been made in bringing the critical issue of violence against women and girls to the fore of humanitarian concerns. There is now agreement at the highest levels of the United Nations (UN) and many donor governments about the importance of addressing violence against women and girls through specialized gender-based violence (GBV) programming.

One measure of this progress is the recent revisions to the Inter-Agency Standing Committee's (IASC) *Guidelines for Integrating Gender-based Violence Interventions in Humanitarian Action* (GBV Guidelines). These update the first IASC GBV Guidelines, published in 2005, with significantly more detail, and according to changes over the last ten years in humanitarian architecture and agreements on humanitarian coordination, leadership, accountability and partnership.[2] As with other guidelines that receive IASC endorsement, they are essential to the humanitarian toolbox.

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1   For a summary of the history of GBV programming in humanitarian settings, see: www.endvawnow.org/en/articles/1472-historical-timeline.html (all internet references were accessed in December 2016).

2   Aimed primarily at those who do not work in specialized GBV programmes or have a specialist background in GBV, the revised IASC GBV Guidelines seek to assist humanitarian actors and communities affected by armed conflict, natural disasters and other humanitarian emergencies to undertake measures to prevent and mitigate GBV across all sectors of humanitarian response. The introduction to the Guidelines lays the groundwork in terms of framing the problem of GBV and describing the international commitments that oblige the entire humanitarian community to address GBV. The remainder of the Guidelines provide specific sectoral guidance across the humanitarian

Given their importance to humanitarian action, a "Task Team" of sixteen organizations with extensive experience in addressing GBV in humanitarian settings was formed to oversee the revisions to the 2005 GBV Guidelines.[3] A strenuous process of consultations was undertaken over the course of two and a half years, in which inputs were solicited at both the global and field levels through:

- broad-based consultations, inputs and feedback from national and international actors both at headquarters and in-country, representing most regions of the world. This included four global reviews of evolving draft versions of the Guidelines, with an estimated 200+ global reviewers providing feedback at various stages of the process;
- direct dialogue with over 100 individuals representing GBV experts working in humanitarian settings; all clusters and areas of responsibility; all cross-cutting areas; twenty-six international non-governmental organizations (INGOs); eleven UN agencies and other entities (e.g. Red Cross/Red Crescent); and four donor agencies;
- two surveys distributed globally in four languages (English, French, Spanish and Arabic) to approximately 160 individuals and organizations and eight inter-agency distribution lists, resulting in 428 completed responses from sixty-six countries; and
- ten field visits to first review preliminary content and then provide pilot trainings on the Guidelines, reaching approximately 1,000 further individuals across UN, INGO and government agencies in nine locations in eight countries.

In September 2015, UNICEF and UNFPA hosted the first launch of the GBV Guidelines for friends and colleagues attending the Sexual Violence Research Initiative's biennial conference in South Africa.[4] As lead author of the revised Guidelines, it was a privilege for me to join a few members of the Task Team at this initial launch and share in the field's excitement about this long-anticipated tool. Coinciding with this first launch, a colleague brought to my attention Chris Dolan's Opinion Note, published in the Summer 2014 issue of the *International Review of the Red Cross*, entitled "Letting Go of the Gender Binary: Charting New Pathways for Humanitarian Interventions on Gender-Based Violence". A major focus of the article is a critical review of elements of the 2005 GBV Guidelines, which the author uses as an entry point for advocating for changes in the 2015 GBV Guidelines.

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programme cycle and within a framework of each humanitarian sector's existing mandates, responsibilities and capacities.

3 The Task Team included representatives of the global GBV Area of Responsibility co-lead agencies – UNICEF and UNFPA – as well as the Office of the UN High Commissioner for Refugees (UNHCR), UN Women, the World Food Programme, expert NGOs (including the American Refugee Committee, Care International, Catholic Relief Services, ChildFund International, Interaction, the International Medical Corps, the International Rescue Committee, Oxfam, Plan International, Refugees International, Save the Children and the Women's Refugee Commission), the US Centers for Disease Control and Prevention, and independent consultants with extensive GBV experience.

4 Launches have since been held in Geneva, Washington, DC, New York and Canada.

At first glance, it might seem like the changes in the 2015 GBV Guidelines that are being advocated for in Dolan's article are mainly articulated around the question: "What about men, boys and lesbian, gay, bisexual, transgender and intersex (LGBTI) populations?" For those who share concerns about attention to these groups in humanitarian action, they might well be pleased with how the 2015 Guidelines acknowledge the problem of sexual violence against men and boys in conflict-affected settings and make recommendations about addressing it (incorporating in some instances Dolan's own feedback, received as part of the Office of the UN High Commissioner for Refugees' (UNHCR) review of the Guidelines), along with the recognition that men and boys can be agents of change when working alongside women and girls to reduce GBV. The 2015 Guidelines also highlight LGBTI issues of concern throughout. In fact, the revised Guidelines acknowledge the protection rights and needs of many groups, even if their concerns are not explicitly related to *gender-based* violence. It could be argued that these are among the most inclusive Guidelines in the history of humanitarian action.

At second glance, however, Dolan's article is evidently getting at something more than a recognition of the rights and needs of men and boys and LGBTI victims of sexual violence within the revised GBV Guidelines and in humanitarian action. The arguments presented in the article speak to a broader agenda – one that is aimed at reframing the GBV field, so that "understandings of GBV shift from an emphasis on gender equality towards an ethos of gender inclusivity".[5] Several interlinked claims seem to dominate in the promotion of this shift towards a "gender-inclusive" approach. The first is that those who would continue to prioritize women and girls in GBV work are operating with outdated models that do not represent what Dolan implies is the current *lingua franca* of gender, which is framed around gender sensitivity rather than gender equality. The second is that the definition of GBV needs to be radically rewritten, in order to reproblematize it away from an emphasis on gender discrimination as it informs violence against women and girls and, in effect, refocus GBV programming. The third is that emerging evidence – or even the lack thereof – is grounds for this overhaul. To ignore these issues, Dolan's Opinion Note suggests, would be to betray the principles of impartiality that drive humanitarian work.

Dolan is not alone in pushing for an expansion of the focus of GBV programming. Indeed, it is because Dolan's comments represent a set of concerns percolating in a few humanitarian corners that it seems worth addressing them at length. Because even as Dolan's arguments derive, in part, from recent gains by, and theoretical approaches of, LGBTI activists, they nonetheless echo familiar challenges to the GBV field; arguments against centring women and girls within GBV language and programmes have been floating around in various guises

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5   Chris Dolan, "Letting Go of the Gender Binary: Charting New Pathways for Humanitarian Interventions on Gender-Based Violence", *International Review of the Red Cross*, Vol. 96, No. 894, 2014, p. 486, available at: www.icrc.org/en/download/file/12231/irrc-894-dolan.pdf.

almost since humanitarian programming on GBV began.[6] They were brought to the discussion table (again) during the drafting of the revised Guidelines.

Dolan's particular critique provides an opportunity not only to reflect on the issue of reframing GBV theory and practice, but also to highlight some important conceptual elements of the revised GBV Guidelines and GBV work generally – timely given that the rollout of the GBV Guidelines is under way. The three claims in Dolan's article that I have identified above are used in this response as points of departure for sharing decisions taken regarding the revised content of the Guidelines. I also present some reflections that link those decisions to larger issues within the GBV field.

Concerning the first theme that the GBV field should be refocused, I highlight below that a dedicated spotlight on the rights and needs of women and girls continues to be hard-won in humanitarian contexts. Attempts to shift away from a focus on violence against women and girls and gender equality in gender and GBV programming represent a regression rather than an advancement for the GBV field. As such, the revised GBV Guidelines purposefully centre on women and girls, and reinforce linkages between GBV prevention and gender equality programming.

In relation to the second theme around revising the GBV definition, I describe how the language of GBV is meant to articulate a gender hierarchy between males and females, and while all violence may arguably be said to have a gendered element, not all violence is reflective of this hierarchy. The revised Guidelines highlight that "GBV" is most commonly used to emphasize the links between systemic inequality experienced by females and their exposure to multiple forms of violence.

Regarding the third theme related to data, I briefly discuss the fact that the three pages of data included in an annex of the revised Guidelines illustrate what we already know: women and girls suffer sexual violence (conflict-driven and within the home and community) at greater rates than males in conflict-affected settings. I then speak to what I consider a more important issue: Dolan's argument that data is "used and abused" to draw attention away from the problem of violence against men and boys and LGBTI populations broadly is incorrect. In fact, data is used

6   At the most basic level, some argue that GBV programming is not the purview of humanitarian action. The first global assessment report on GBV was published only in 2002. As the author of that report, I tracked several programmes that had been introduced in different regions of the world – most only a few years old – and concluded that there were "significant gaps in policy, programming, coordination, and protection" related to GBV in humanitarian settings globally. During research for the report I was often told by interviewees – particularly men in dominant positions within the humanitarian response architecture – that to address violence against women and girls was to meddle in culture and therefore outside the scope of humanitarian intervention. See Jeanne Ward, *If Not Now, When? Addressing Gender-Based Violence in Refugee, IDP and Post-conflict Settings*, Reproductive Health Response in Conflict Consortium, 2002. It is routine amongst many GBV actors to discuss experiences of pushback against a focus on women and girls that arise at all levels of humanitarian action and across all settings. However, these challenges are often not captured in articles or guidelines, in part because of fears linked, in the words of one GBV expert, to "rising above the parapet" and risking a hostile response that undermines what support there is for GBV programming. This is discussed in more detail later in the article.

to draw attention to the particular issues facing women and girls, and the urgent need to attend to those issues.

Finally, I conclude with a recap of the importance of retaining a focus on women and girls in GBV work, while moving forward in partnership with those who may wish to accelerate programming directed to males and LGBTI communities broadly.

Prioritizing women and girls in GBV theory and practice remains important and necessary

Dolan's article maintains that a model of GBV that is used to conceptualize females' vulnerability to violence as a function of their subordinate status in relation to males is "unidirectional and static".[7] This understanding of GBV is said to reflect a "partial narrative" that sidelines males and LGBTI populations.[8] Dolan goes so far as to suggest that a female-centred approach to GBV programming is to men what patriarchy is to women, insofar as it replaces "one form of discrimination [male to female] with its almost equally unsatisfactory mirror image [female to male]".[9] The clear message that emerges in this critique is that it is high time GBV programming progressed beyond centring on women and girls to a focus on men, women, boys and girls as well as LGBTI populations writ large.[10]

What the 2015 GBV Guidelines say

There was robust agreement by reviewers that women and girls should remain the principal focus of the revised Guidelines given females' vulnerability to particular forms of violence and the need for specialized guidance to address that violence. In concordance with the global evidence base on violence against women, reviewers also agreed that the Guidelines should support actions to promote gender equality as central to the prevention of GBV.[11] Inevitably, there were a

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7   C. Dolan, above note 5, p. 493.
8   *Ibid.*, p. 500.
9   *Ibid.*, p. 500 (the internal brackets are mine).
10 Throughout this paper, I refer to "LGBTI populations broadly" or "writ large" or "generally". I do this in order to differentiate work that is focused on shared LGBTI concerns related to sexual orientation and gender identity from work on GBV that strives to meet the needs of all female survivors and those at risk, including lesbians and transgender women. However, in using terms such as "broadly", I do not wish to wrongly imply that the LGBTI community is necessarily holistic or homogeneous. There is a tendency in Dolan's article to link men and LGBTI populations together as an excluded group, the generality of which I do not wish to replicate.
11 The IASC *Gender Handbook in Humanitarian Action*, 2006, p. 1, defines gender equality as "equality between women and men". The *Handbook* identifies addressing GBV as a critical targeted action necessary to achieving gender equality. Available at: www.humanitarianresponse.info/system/files/documents/files/Gender%20Handbook.pdf. See also Liz Wall, "Gender Equality and Violence against Women: What's the Connection?", Australian Centre for the Study of Sexual Assault Research Summary, 2014, available at: www3.aifs.gov.au/acssa/pubs/researchsummary/ressum7/ressum7.pdf; Kathryn L. Falb, Jeannie Annan and Jhumka Gupta, "Achieving Gender Equality to Reduce Intimate Partner Violence against Women", *The Lancet Global Health*, Vol. 3, No. 6, 2015, available at:

few outliers.[12] The Task Team deliberated carefully on recommendations that were inconsistent with the norm or represented particular flashpoints, including the definition of GBV and the extent to which the Guidelines should target men and boys and LGBTI populations as victims or as being at risk of GBV.

While all the Task Team members agreed that all survivors of sexual and other forms of violence in humanitarian settings should receive care and support, many understand the framing and approaches to violence against men and boys and LGBTI populations generally as necessarily different than for women and girls – not only because the drivers of the violence are different, but also because the socio-political and personal impacts of the violence are different. Several Task Team members worked together on an "Essential to Know" box in the introduction to the Guidelines that captures the rationale for the Guidelines' focus on women and girls:

> Women and girls everywhere are disadvantaged in terms of social power and influence, control of resources, control of their bodies and participation in public life – all as a result of socially determined gender roles and relations. Gender-based violence occurs in the context of this imbalance. While humanitarian actors must analyse different gendered vulnerabilities that may put men, women, boys and girls at heightened risk of violence and ensure care and support for all survivors, *special attention should be given to females due to their documented greater vulnerabilities to GBV, the overarching discrimination they experience, and their lack of safe and equitable access to humanitarian assistance.*[13]

In other words, the Guidelines – as with GBV work itself – recognize and respond to the particular relation that females have to a system of gender inequality that favours males over females. Violence against women and girls supports and affirms this structural discrimination. Sexual violence is but one manifestation;[14] intimate

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www.thelancet.com/journals/langlo/article/PIIS2214-109X(15)00006-6/abstract?cc=y=; Rachel Jewkes, Michael Flood and James Lang, "From Work with Men and Boys to Changes of Social Norms and Reduction of Inequities in Gender Relations: A Conceptual Shift in Prevention of Violence against Women and Girls", *The Lancet*, Vol. 385, No. 9977, 2014, available at: www.thelancet.com/journals/lancet/article/PIIS0140-6736(14)61683-4/abstract.

12 In order to ensure transparency, feedback from the global review was catalogued and responded to in writing during the revisions process, and shared with all those who reviewed the Guidelines as well as any other interested parties.

13 Inter-agency Standing Committee, *Guidelines for Integrating Gender-Based Violence Interventions in Humanitarian Action*, 2015 (GBV Guidelines), p. 6 (emphasis in original). The Guidelines and other materials can be downloaded at: www.gbvguidelines.org.

14 Although not the focus of this article, it is worth noting that a decision was taken when drafting the 2005 GBV Guidelines to focus on sexual violence in the emergency stages of humanitarian intervention, due in part to the appalling failure to address sexual violence against women and girls in Darfur occurring at the time the first GBV Guidelines were drafted. This focus on sexual violence in the 2005 Guidelines appears to have contributed to a misunderstanding by some that sexual violence is separate from or exceptional to other forms of GBV, driven purely by the conflict rather than existing on a continuum of violence to which females are exposed often multiple times throughout their lifespan, in peacetime as well as humanitarian emergencies. The UN Security Council's attention to sexual violence as a feature of conflict (starting in 2008 with UNSC Res. 1820) may also have contributed to this misunderstanding, insofar as sexual violence rapidly became virtually the sole wartime violation of women's and girls' rights on which the

partner violence, child and forced marriage, and forced and/or coerced prostitution – along with multiple other forms of violence against women and girls – are each key sites of male domination that the revised GBV Guidelines target. Issues of class, ethnicity, religion, sexuality and other factors can compound for different women and girls to contribute to "situations of double or triple marginalization".[15] The Guidelines recognize that it is both the nature and the scope of their gender-based disadvantage – still evident in every society in the world – that warrants specialized guidance and programming for women and girls. Yet, as discussed further below, attention to women and girls is still a challenge in many humanitarian settings, and attempts to shift from a focus on gender equality to gender inclusivity risk increasing, rather than decreasing, those challenges.

Ensuring attention to women and girls has been and continues to be hard-won

In Dolan's article, it is claimed that a focus on the male–female binary in gender equality programming is "anachronistic",[16] and that the "pursuit of gender equality by way of GBV interventions has been at the cost of humanitarian principles".[17] While these assertions appear to be linked, at least in part, to a loose reframing of "gender" (discussed further below) that has emerged particularly in queer theory, they are striking in their lack of recognition of the historic and ongoing struggle to hold duty bearers accountable to the problem of violence against women. They also overlook the responsibility of the humanitarian community to attend specifically to the rights and needs of women and girls; the importance of no longer deferring social justice for women and girls in humanitarian contexts; and the imperative to reduce violence against females and promote gender equality in order to achieve sustainable solutions to humanitarian crises.[18] In fact, these assertions echo thinking and approaches that

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Council focused, squeezing out not only other abuses but also attention to women's agency as actors involved in conflict. This victim focus also suffered from the Council's narrow focus on conflict alone – conflict-related sexual violence was treated as separate from other forms of GBV. This misunderstanding is reflected in Dolan's Opinion Note when it is suggested that there is now "increasing acknowledgement … that sexual violence is not the only form of gender-based violence" (C. Dolan, above note 5, p. 485). In fact, there has been acknowledgement amongst GBV experts since the very beginning of this work that GBV comprises a spectrum of violations of which sexual violence is only one, and programming in the field often reflects this. The revised GBV Guidelines reflect this reality. See also, International Rescue Committee, *Private Violence, Public Concern: Intimate Partner Violence in Humanitarian Settings*, Practice Brief, 2015, available at: www.rescue.org/sites/default/files/resource-file/IRC_PVPC_FINAL_EN.PDF.

15 UN Special Rapporteur, *Integration of the Human Rights of Women and the Gender Perspective*, E/CN.4/205/72, 2005, p. 8.

16 C. Dolan, above note 5, p. 496.

17 *Ibid.*, p. 499.

18 On the last point about State fragility and its link to gender inequality, see, for example, Donna Lee Bowen, Valerie M. Hudson and Perpetua Lynne Nielsen, "State Fragility and Structural Gender Inequality in Family Law: An Empirical Investigation", *Laws*, Vol. 4, No. 4, 2015, available at: www.mdpi.com/2075-471X/4/4/654.

required activists to mobilize in the first place to bring attention to violence against women in conflict zones. Decades of rubrics that broadly addressed "all people" or "all humanitarian crimes" resulted in no action on behalf of the specific rights and needs of women and girls.

Only by developing policies, standards and guidelines that targeted their particular concerns was attention paid to women and girls in humanitarian settings. In the wake of the Third World Conference on Women in Nairobi in 1985, the first working group on refugee women was convened to advocate for the needs of women affected by conflict. The working group's lobbying activities resulted in the 1989 appointment of a Senior Coordinator for Refugee Women to UNHCR. In 1990, UNHCR adopted a policy on refugee women's protection, from which evolved UNHCR's 1991 *Guidelines on the Protection of Refugee Women.* By highlighting the general protection needs of women affected by conflict (as distinct from men), the guidelines set the stage for standardizing programming that serves women and girls. Although the guidelines explicitly acknowledged exposure to sexual violence as a vulnerability of refugee women and called upon the humanitarian community to address this issue within its protection mandate, it took considerable time for the humanitarian community to support GBV programming for women and girls. A handful of individual GBV projects were funded in refugee and displaced population settings in the 1990s, but the global humanitarian GBV field did not begin to coalesce until the mid-2000s, and particularly after 2008, when the first coordination body for humanitarian response to GBV – the GBV Area of Responsibility – was established at the global level.[19]

Relative to the almost total absence of female-focused humanitarian programming twenty-five years ago, there are now projects in a preponderance of emergency-affected settings that are explicitly directed to women and girls.[20] This targeted attention is key to advancing women's and girls' agency – a critical element of any efforts to address GBV. In fact, a global study undertaken recently found that autonomous feminist activism is the single most important factor in driving improvements in women's rights, underscoring the importance of organizing by and with women – separately – to support lasting solutions to women's and girl's exposure to GBV.[21] And this isn't done just for expediency;

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19 The majority of global tools to support attention to violence against women and girls in humanitarian action have been developed since the 2000s. Many are available on the GBV Area of Responsibility website, available at: gbvaor.net.

20 The IASC Gender Marker is one way to measure this. It is a tool used to assess the extent to which humanitarian programmes ensure equal benefits to males and females, and/or support gender equality. Despite progress, a 2015 review found that many humanitarian response plans lack a gender perspective. See IASC, *Gender Equality in the 2015 Strategic Response Plan: Results and Evolution of the IASC Gender Marker*, 2015, available at: http://reliefweb.int/sites/reliefweb.int/files/resources/gender_equality_in_the_strategic_response_plan_2015.pdf.

21 Mala Htun and S. Laurel Weldon, "The Civic Origins of Progressive Policy Change: Combating Violence against Women in Global Perspective, 1975–2005", *American Political Science Review*, Vol. 106, No. 3, 2012, available at: http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=8675829&fileId=S0003055412000226.

in the context of global patriarchy, women as a subjugated group *should* be leading their own emancipation.

Despite progress in attention and support to women and girls affected by emergencies, much remains to be done. For those to whom it now looks as if women and girls are hogging the spotlight of humanitarian response, it's worth taking a second glance. Women's voices, rights and needs are still often overlooked. In a telling example of the ongoing invisibility of female-specific concerns in humanitarian settings, women constituted only 13% of persons interviewed or spoken about in media in fifteen transitional and conflict countries in 2015.[22] GBV programming is one of the few areas within the humanitarian response structure where women's rights and needs are explicitly acknowledged and addressed, yet these programmes continue to be grossly under-resourced. In 2013, the International Rescue Committee (IRC) published a discussion paper for which it reviewed appeals for five emergencies – three flash appeals and two refugee response plans – and found that GBV programmes accounted for less than 1–2% of requested funding in each.[23] In a 2015 follow-up report, the IRC found that the 2014 Humanitarian Response Plans (HRPs) for the Central African Republic, South Sudan and Iraq, for example, only fulfilled 5.2%, 20.9% and 5.5%, respectively, of what was requested for GBV programmes, representing minuscule percentages of the total HRP in each country.[24] The same low level of investment appears to have befallen gender equality programming: the share of humanitarian funding allocated to programmes focusing primarily on, or contributing significantly to, gender equality fell from 22% in 2013 to 12% in 2014.[25]

This low level of funding is a marker of the persistent failure in humanitarian action to make a real difference in the well-being of women and girls. In the same 2015 report, the IRC goes on to describe lack of humanitarian leadership around attention to GBV as another major contributor to the humanitarian community's failure to adequately meet the needs of women and girl survivors and those at risk – basic programmes for survivors were wholly inadequate in all countries assessed. In another case example, Refugees International found that humanitarian response to Typhoon Haiyan, which struck the Philippines in 2013, "failed to fully incorporate gender and GBV

22 See: http://whomakesthenews.org/gmmp/gmmp-reports/gmmp-2015-reports.
23 International Rescue Committee, *Lifesaving, Not Optional: Protecting Women and Girls from Violence in Emergencies*, 2013, p. 2, available at: www.themimu.info/sites/themimu.info/files/documents/Ref_Doc_Lifesaving_Not_Optional_-_Discussion_Paper_Feb2013.pdf.
24 International Rescue Committee, *Are We There Yet? Progress and Challenges in Ensuring Life-Saving Services and Reducing Risks to Violence for Women and Girls in Emergencies*, 2015, available at: www.rescue.org/sites/default/files/document/664/ircarewethereyetwebfinalukspell.pdf.
25 Global Humanitarian Assistance, *Funding Gender in Emergencies: What Are the Trends?*, 2014, p. 3, available at: www.globalhumanitarianassistance.org/wp-content/uploads/2014/09/Gender-briefing_humanitarian_19092014.pdf.pdf. Also see Lydia Alpizar Durán, "20 Years of Shamefully Scarce Funding for Feminists and Women's Rights Movements", *AWID*, May 2015, available at: www.awid.org//node/3317.

dimensions into the early phases of the response, which affected each clusters' ability to effectively assist its target population".[26]

The response to Typhoon Haiyan illustrates that even when the problem of GBV is acknowledged, addressing GBV and gender inequality continues to be considered a "later stage" intervention by some humanitarian actors, too complex to forefront during emergency interventions. Dolan's article makes reference to this position when suggesting that addressing the foundations of GBV (e.g. gender-based discrimination and inequality) may not be relevant or possible "when people are in crisis".[27] The fact that priority actions to build respect for women's rights and agency, promote gender equality and reduce GBV are often postponed in humanitarian action as being low-priority reflects the too common reality that "'[l]ater' is a patriarchal time zone"[28] in which delays serve to maintain the status quo.

A series of reports recently released by the Women's Refugee Commission relating to the refugee crisis across Europe tell the ongoing story of how many humanitarian actors on the ground do not perceive GBV to be a significant problem, and programmes are not in place to assist survivors. These reports illustrate how far we have to go until the rights and needs of women and girls are taken seriously enough to be fully integrated into humanitarian action.[29] It would be entirely premature to dismantle women- and girl-centred GBV programming when the humanitarian system is not yet fully acting on its commitments and so many women and girls worldwide have yet to benefit.

Gender inclusivity represents a regression to male dominant language and practice

What Dolan's critique does underscore is how the language of gender is being reinterpreted, often with the effect of undermining a women's rights orientation in both gender equality and GBV prevention and response work. When arguing that gender and GBV framing should shift from an emphasis on gender equality to gender inclusivity, Dolan suggests this will "allow gender to recover its analytical, practical and political potential".[30] This subtly (and incorrectly) implies that gender – in theory, studies and programming – was at one time focused on "gender inclusivity" but is no longer because it has been co-opted by

26 Marcy Hersh, *Philippines: Emergency Response Fails Women and Girls*, Refugees International Field Report, 2014, p. 1, available at: http://reliefweb.int/sites/reliefweb.int/files/resources/Philippines%20GBV%20New%20Approach%20letterhead.pdf

27 C. Dolan, above note 5, p. 486.

28 Cynthia Enloe, cited in Nadine Puechguirbal, "The Cost of Ignoring Gender in Conflict and Post-Conflict Situations: A Feminist Perspective", *Amsterdam Law Forum*, Vol. 4, No. 1, 2012, p. 15.

29 Women's Refugee Commission (WRC), *No Safety for Refugee Women on the European Route: Report from the Balkans*, January 2016, available at: www.womensrefugeecommission.org. In a series of four assessments from November 2015 through May 2016, the WRC found that opportunities to protect and empower refugee women are systematically squandered. Also see: www.buzzfeed.com/jinamoore/women-refugees-fleeing-through-europe-are-told-rape-is-not-a#.vhm0wBJJ3x.

30 C. Dolan, above note 5, p. 501.

a discriminatory feminist project. In fact, the reverse is occurring. The language of gender has been central to women's rights activism and to work on violence against women as an articulation of the reality of women's subordination within the prevailing gender order. Now, however, gender is increasingly being used to talk of women's and men's roles, a shift that effectively masks the problems of male privilege and women's oppression.

Using the "gender" language was not intended to replace attention to women's experiences in this way. When many women's studies programmes in universities shifted to gender studies programmes in the 1990s, they did so not because they were no longer focusing on women's issues, but because they sought to clearly frame women's issues within a larger social, economic and political problem of patriarchy, such that their work could no longer be ignored or derided by male peers as irrelevant to the body politic. Now many of those same programmes are struggling against institutional pressure to focus on women and men equally because of the "gender" emphasis. Similarly, gender mainstreaming emerged from the 1985 Third World Conference on Women and was introduced as a strategy for working towards gender equality in the Beijing Platform for Action of the 1995 Fourth World Conference on Women. Still fundamental to feminist activism, now gender mainstreaming is too often misunderstood to be addressing the socially and politically differentiated needs of men, women, boys and girls, without attending to the inequality underpinning these differentials. As such, gender mainstreaming's transformative agenda of challenging gender-based injustice and a direct focus on empowering women is increasingly obscured.[31]

The ebb away from centring women and girls in gender and GBV isn't only reflected in the halls of academia and the sometimes complex theoretical discussions about our work. There are, every day, practical implications for humanitarian action. At the global level, for example, Iceland announced in October 2014 that it would co-host a UN conference on gender, including gender equality and violence against women, to which only males were invited.[32] In a summit on sexual violence in conflict held in London in 2014, one of the few non-governmental panels allowed above "The Fringe" – the room where activists and programmers showcased their work on display boards – was dedicated to sexual violence against males.[33] UNHCR held a panel in December 2015 for the 16 Days

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31 See, for example, Kirsty Milward, Maitrayee Mukhopadhyay and Franz F. Wong, "Gender Mainstreaming Critiques: Signposts or Dead Ends?", *IDS Bulletin*, Vol. 46, No. 4, 2015, available at: www.readcube.com/articles/10.1111%2F1759-5436.12160; Mary Daly, "Gender Mainstreaming in Theory and Practice", *Social Politics*, Vol. 12, No. 3, 2005, available at: http://sp.oxfordjournals.org/content/12/3/433.abstract; Anu Pillay, "Gender Praxis in Emergencies: 20 Years after Beijing", United Nations Research Institute for Social Development, April 2015, available at: www.unrisd.org/unrisd/website/newsview.nsf/(http://News)/2D7805628CBE469FC1257E1B0058AE9E?OpenDocument.

32 In response to concerns expressed by women's rights advocates to this approach, Iceland's foreign minister agreed that women would be able to participate in the meeting, while also stating that this "Barbershop Conference" was oriented towards creating a scaled-up space for men to speak to one another, as they might do in an actual barbershop. The meeting was held in January 2015. See: www.un.org/apps/news/story.asp?NewsID=49808.

33 Feminist thinkers and women's rights activists also expressed concerns that the summit focused away from gender issues and towards war as the explanation for conflict-related sexual violence. For

of Activism Against Gender-Based Violence campaign in which three of the four panellists were male.[34]

Engaging men in conversations about violence against women, or showcasing the problem of sexual violence against men in conflict at a global conference, are not problematic actions in themselves – indeed, they are of critical importance. Rather, the issue is whether and how these conversations represent what some rights activists refer to as "phallic drift"[35] – a tendency to revert towards a male point of view and attention to males, with the concomitant diminishment of feminist voices, approaches and attention to women's needs and experiences. In 2013, the US Institute for Peace held an international symposium on "Men, Peace and Security". Whether it was the intent of the symposium or not, the implication of the title is a shift in focus from the Women, Peace and Security mandate to a focus on men; one of the objectives for the symposium was engaging men in peacebuilding and security, as if they are somehow excluded from it.[36] In reality only 4% of signatories in thirty-one major peace processes between 1992 and 2011 were women; 2.4% of chief mediators, 3.7% of witnesses and 9% of negotiators were women.[37] Similarly, the 2014 MenEngage global conference listed violence as one conference topic among seven others, under which violence against women was a subset; whereas the original purpose of "engaging men and boys" was to address men's violence against women and girls, much of the work of this community appears to be shifting to a men's movement focused around men's issues and perspectives, with a questionable degree of accountability to women.[38]

At the field level, particularly in many of the highly patriarchal settings in which much of the world's current conflicts are taking place, it can be a daily struggle to ensure attention to the problem of violence against women and girls,

thoughts on the summit, see Anne Marie Goetz, "Stopping Sexual Violence in Conflict: Gender Politics in Foreign Policy", Open Democracy, 20 June 2014, available at: www.opendemocracy.net/5050/anne-marie-goetz/stopping-sexual-violence-in-conflict-gender-politics-in-foreign-policy. Goetz argues: "Advocacy language suggesting 'it's not about sex/women/gender, it's about war' may have helped to convince the Security Council that this was a subject requiring their attention, but may also have unwittingly downplayed the importance of the feminist emancipatory projects of empowering survivors, and ensuring that protection and recovery efforts contribute to transformation in gender relations."

34 See: https://gallery.mailchimp.com/6e94daee6b3fa3110e869bf47/files/UNHCRLAW_Panel_Agenda.pdf.

35 For the origination of this term, see Ronni Sandroff, "Beware of Phallic Drift", *On the Issues: The Progressive Women's Quarterly*, Vol. 3, No. 2, 1994, p. 2.

36 See: www.usip.org/events/men-peace-and-security-symposium-agents-of-change.

37 UN Women, *Women's Participation in Peace Negotiations: Connections between Presence and Influence*, 2015, available at: http://reliefweb.int/sites/reliefweb.int/files/resources/03AWomenPeaceNeg.pdf.

38 For information about the MenEngage Global Symposium, see: www.menengagedilli2014.net/symposium.html. For further feminist reflection about the MenEngage work, see Shamim Meer, *Struggles for Gender Equality: Reflections on the Place of Men and Men's Organisations*, Open Society Initiative for Southern Africa, 2012, available at: www.eldis.org/go/home&id=70513&type=Document#.VpnzADY65-U. Also see Michael Flood, "Work with Men to End Violence against Women: A Critical Stocktake", *Culture, Health & Sexuality*, Vol. 17, 2015, available at: http://dx.doi.org/10.1080/13691058.2015.1070435. It is important to note that some in the MenEngage community are concerned about issues of accountability to women and girls and have introduced related standards and guidelines. See MenEngage Alliance, "Accountability Standards and Guidelines", 2014, available at: http://menengage.org/resources/menengage-accountability-standards-guidelines/.

as described above. In the midst of these struggles, even some of the strongest women-targeted programming appears to be at risk. The IRC, for example, recently merged its Women's Protection and Empowerment Unit into a larger department that addresses protection concerns generally, despite calls from several donors and others to maintain a separate unit.

Gender experts have suggested that subsuming the problem of GBV within a broad protection frame can lead to "protectionist" thinking and approaches that may reinforce gender inequality.[39] While Dolan hails UNHCR's adoption of its Age, Gender and Diversity Mainstreaming (AGDM) approach as "radical" and a "noteworthy example of an institutional effort to go beyond a focus on women and girls",[40] it might be argued that AGDM's generalist protection frame risks concealing, rather than advancing, the specific needs and rights of different populations, in this case those of women and girls.[41] In particular, asserting the value of an "inclusive" approach fails to recognize that females are routinely excluded from male spaces, and also devalues and undermines women's rights and access to their own spaces.

It is likely that attention to gender relations as a means of addressing the causes of violence against women and girls served to awaken interest in the problems of violence against males and against LGBTI populations generally – which many of us in the GBV community initially understood to be a positive outcome of our work, opening the door for others with appropriate expertise to address these issues through the development of an evidence base for their theory and programming. There is a lot of untapped opportunity for synergies between work that aims to address male violence and work that aims to prevent violence against women. That said, examination of the problem of violence against men or against LGBTI communities generally, however welcome, should not be at the expense of efforts to understand and address violence against women and girls.

We could hardly have foreseen the possibility that the language of gender would be appropriated and neutralized to such an extent as to underpin the argument that males and females are equally affected by "gender" issues and that men have been excluded from programming around gender.[42] Nor did those of

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39 See, for example, Anu Pillay, "Gender and Men in Humanitarian Action", paper written for master's in humanitarian affairs, University of York, 2015, p. 6. The author describes the protectionist approach as one that "while recognising differences, seeks to curtail or curb women's activities or freedoms with the rationale that the aim is to 'protect' women from harm or wrongdoing. This approach does not challenge gender discrimination, but reproduces it in the guise of protecting women."

40 C. Dolan, above note 5, p. 488.

41 For a discussion of this, see Alice Edwards, "Transitioning Gender: Feminist Engagement with International Refugee Law and Policy 1950–2010", *Refugee Survey Quarterly*, Vol. 29, No. 2, 2010, available at: https://academic.oup.com/rsq/article-abstract/29/2/21/1531885/Transitioning-Gender-Feminist-Engagement-with. Edwards suggests that "a further shift away from a focus on women and women's rights under the AGDM agendas to the concerns and needs of men and boys, or human beings more generally, could undermine the goals of sexual equality and social justice, in particular by downplaying the power dynamics at issue".

42 See, for example, Susan Somach, *The Other Side of the Gender Equation: Gender Issues for Men in the Europe and Eurasia Region*, Final Report, USAID, 2011, available at: www.ineesite.org/en/resources/resource_db_the-other-side-of-the-gender-equation-gender-issues-for-men-in. Also see Daniel Neumann,

us struggling to bring attention to the problem of GBV anticipate how shifts in the gender language would be used in attempts to reframe GBV work away from a focus on women and girls, as explored further below.

The GBV definition is a cornerstone to framing work on violence against women and girls

Here we arrive at another key contention in Dolan's critique: that the definition of GBV should be rewritten to more heartily embrace various forms of violence against men and boys and LGBTI groups. Just as Dolan has suggested that a feminist frame for gender is "anachronistic", his article also suggests that the 2005 GBV Guidelines definition "arises from a particular moment in the history of addressing women's needs and concerns" which "asserts a unidirectional causal relationship between being a woman, having subordinate status and being correspondingly vulnerable to violence".[43]

What the 2015 Guidelines say

What has been inaccurately characterized as a particular moment in history lives on: the agreed definition of GBV for the 2015 Guidelines is the same one that was included in the 2005 Guidelines. It emphasizes that violence is "based on socially ascribed (i.e. gender) differences *between* [emphasis added] males and females" and highlights that the term "GBV" is most commonly used "to underscore how systemic inequality between males and females – which exists in every society in the world – acts as a unifying and foundational characteristic of most forms of violence perpetrated against women and girls".[44]

It is accurate, however, to suggest that the definition of GBV arose within the women's rights movement and that it is used to articulate women's exposure to violence in the context of patriarchy. In fact, without that movement we would not have the language of "GBV". Whereas the 2005 Guidelines did not explicitly mention the provenance of the term, recommendations from several Task Team members led to the inclusion within the 2015 Guidelines of reference to the 1993 UN Declaration on the Elimination of Violence Against Women (DEVAW), wherein GBV was first codified in an international declaration, and which defines violence against women as "any act of gender-based violence that results in, or is likely to result in, physical, sexual or psychological harm or suffering to women".[45]

Ann Chang and Otim Patrick, *Gender against Men*, Refugee Law Project – Video Advocacy Unit, May 2012, available at: www.youtube.com/watch?v=mJSl99HQYXc.

43 C. Dolan, above note 5, p. 493.

44 GBV Guidelines, above note 13, p. 5.

45 As a notable indication of the extent to which advocacy for gender neutrality shifts us away from well-established feminist theory, a request was made in the Guidelines reviewer feedback that "this paragraph on the CEDAW [*sic* – the reference was actually to DEVAW] definition add: 'this definition has been developed in the context of eliminating violence against women and girls while it is increasingly acknowledged that men and boys face gender based violence as well. The current CEDAW [*sic*] definition needs to be revised to include all those at risk of gender based violence with reference

The Guidelines also acknowledge that some actors use the term GBV to describe select forms of violence against men and boys – particularly select forms of sexual violence in conflict – as well as specific forms of violence against LGBTI groups broadly. There was tension among some Task Team members about including these points because of concerns that such definitional compromises could be exploited in order to draw attention away from the problem of violence against women and girls in GBV theory and practice.

In his article, Dolan captures these types of definitional compromises in the 2005 Guidelines when he identifies some inconsistencies around the framing of GBV. For example, the 2005 Guidelines primarily talk about women and girls as those affected by GBV, but they occasionally reference "women and children", and they allow that "men and boys may be victims of gender-based violence, especially sexual violence".[46] This lack of precision in the framing of GBV has been a persistent problem. In one example from the field, the GBV coordination mechanism in Afghanistan added "men and boys" throughout GBV documents that use the DEVAW definition of violence.

While many of us working in the field have been clear within our own community that GBV speaks to the problem of violence against women and girls, we appreciate the need for all survivors of violence to receive services, and this may be one reason for inexactness in our language.[47] Another is that we have responded to pressure to make minor adjustments in the interpretation of the term "GBV" in order to secure support from various constituencies – particularly those with a resistance to the project of equality between men and women. One colleague has described this tendency as a pragmatism that is necessary to gain sideways attention to women and girls in the male-dominated environments in which we work;[48] she

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to violence against women, girls, men and boys based on gender and unequal power relations.'" The Task Team declined to include a recommendation within the Guidelines that DEVAW be revised.

46 2005 GBV Guidelines, p. 7.

47 There is undoubtedly room for specialists working on the problem of sexual violence against males to improve knowledge and capacity of service providers in order to meet male survivor needs sensitively and ethically. It may be useful to highlight, however, that although the argument has been made by some non-GBV specialists that male victims of sexual violence are actively excluded from clinical services that GBV programmes support, this does not reflect reality – in humanitarian settings where it exists, clinical care is meant to be available for any sexual assault survivor, in accordance with global guidance. See World Health Organization (WHO), UNFPA and UNHCR, *Clinical Management of Rape Survivors: Developing Protocols for use with Refugees and Internally Displaced Persons*, revised ed., 2004. The GBV Information Management System (GBVIMS) captures sex- and age-disaggregated data on survivors' access to services, including men and boy's access to clinical care for sexual assault. For more information about the GBVIMS, see: www.gbvims.com/what-is-gbvims/gbvims-background/.

48 It is worth noting that in 2016, despite concerted efforts by women's activists, the UN Secretary-General appointment was a male, as all previous appointments have been. In November 2016, all incoming humanitarian coordinators were male, despite women being underrepresented in these positions globally. See Ayla Black, "Women in Humanitarian Leadership – Where Are They?", *Humanitarian Advisory Group*, November 2016, available at: http://humanitarianadvisorygroup.org/women-in-humanitarian-leadership-where-are-they/. Importantly, male-dominated environments include not only international institutions, on which the cited article focuses, but also humanitarian settings themselves, many of which are among the lowest in the global gender inequality index. See: http://hdr.undp.org/en/content/gender-inequality-index-gii.

concludes, however, that efforts towards pragmatism can "trap us into validating the patriarchal perspective".[49]

In any case, while concessions are still evident, the 2015 Guidelines are more explicit about how violence against males, as well as violence against LGBTI groups, is *different* from violence against women and girls.[50] Several Task Team members articulated it this way during the Guidelines drafting process: examining and addressing the ways in which hegemonic masculinity can be used by some men (and, in rarer cases, some women) as a way to cause harm to some other men is in theory and in practice very different from examining and addressing the ways in which patriarchy leads to "the domination over and discrimination against women by men and to the prevention of the full advancement of women" (as articulated in DEVAW).[51]

It's not a binary, it's a hierarchy

The accusation that the GBV field employs a "simplistic" male–female binary misses – or chooses to ignore – a key point that DEVAW underscores: it is not a binary, it is a hierarchy. In this way, there is a not an equivalence of violence for males and for females that can be captured in the same overall framing of violence, nor is there an equivalence in the case of trans- and homophobic violence against LGBTI populations. While there may be areas of intersectionality and commonality in some determinants, the drivers of violence, and the experiences and consequences of it, are different for each group in fundamental ways.

In broad terms – and in case this point has not already been made sufficiently – the theory and practice related to violence against women problematizes the issue of patriarchy, or men's and women's comparative place in the *gender hierarchy*. The fact of this subordination is universal, applying to the experience of all women and girls. The violence is more often perpetrated against females by men they know intimately, and it is likely to happen multiple times in different manifestations over a woman's lifespan. The violence men both experience and perpetrate against other men is not only more likely to be between strangers or acquaintances, but it is also not represented in a lifelong pattern of diverse and systematic forms and violence driven by the same foundational issue, and neither causes nor contributes to the subjugation of men as an entire – and defining – social category of people.[52]

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49 Nadine Puechguirbal, "I Speak Fluent Patriarchy, But It's not My Mother Tongue: Perspectives of a Feminist Insider within International Institutions", Graduate Institute for International and Development Studies, Colloquium: "Who Knows? Circulation of Feminist Knowledge on Development and Gender Experts", Geneva, 19–20 November 2015, p. 13.

50 The revised GBV Guidelines suggest that "certain forms of violence against men and boys – particularly sexual violence committed with the explicit purpose of reinforcing gender inequitable norms of masculinity and femininity … [are] based on socially constructed ideas of what it means to be a man and exercise male power". GBV Guidelines, above note 13, p. 5.

51 Declaration on the Elimination of Violence Against Women, UNGA Res. 48/104, 20 December 1993.

52 Analyzing evidence across 654 countries from 1982 to 2011, WHO estimated that as many as 38% of female homicides globally were committed by male partners, while the corresponding figure for men

Therefore, understanding and addressing male victimization tends to focus more on incident types rather than a gendered political economy of violence. To the extent that nascent theory does find commonality in some forms of violence against men that occur *because the victims are men* (rather than because the victims are poor, or of a particular race, religion, etc.), it often problematizes the issue of masculinity, or the negative effects on men related to largely heteronormative, male-determined and primarily male-enforced *gender roles*. Queer theory can also be said to problematize gender roles, but with a particular focus on how those roles restrict freedoms and rights around sexual orientation and *gender identity*. Concerns linked to gender roles and gender identity are different from those linked to gender discrimination, which the Office of the High Commissioner for Human Rights (OHCHR) points out when it highlights that "lesbians and transgender women are at particular risk because of gender inequality and power relations with family and wider society".[53]

All violence may be gendered, but not all violence is based on gender discrimination

Arguments such as Dolan's would have us understand that violence should be categorized as gender-based if the violence "is informed by gendered assumptions about masculinity and femininity".[54] It is worth asking how this categorization clarifies the experiences of different groups – in this case males, females, and LGBTI populations generally. Virtually every type of violence has a gendered

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was 6%. WHO Department of Reproductive Health and Research, London School of Hygiene and Tropical Medicine, and South African Medical Research Council, *Global and Regional Estimates of Violence against Women: Prevalence and Health Effects of Intimate Partner Violence and Non-Partner Sexual Violence*, 2013, p. 26, available at: http://apps.who.int/iris/bitstream/10665/85239/1/9789241564625_eng.pdf?ua=1. In its *Global Status Report on Violence Prevention*, WHO further concluded: "Whereas males are disproportionately represented among victims of violent death and physical injuries treated in emergency departments, women and girls, children and elderly people disproportionately bear the burden of the nonfatal consequences of physical, sexual and psychological abuse, and neglect, worldwide. They also suffer a host of negative health and social consequences from these acts of violence that often last a lifetime and that are not captured in official statistics." WHO, *Global Status Report on Violence Prevention*, 2014, p. 8, available at: www.who.int/violence_injury_prevention/violence/status_report/2014/en. Also see WHO, *World Report on Violence and Health*, 2002, p. 89, available at: http://whqlibdoc.who.int/hq/2002/9241545615.pdf. Here WHO concludes that "[o]ne of the most common forms of violence against women is that performed by a husband or an intimate male partner. This is in stark contrast to the situation for men, who in general are much more likely to be attacked by a stranger or acquaintance than by someone within their close circle of relationships. The fact that women are often emotionally involved with and economically dependent on those who victimize them has major implications for both the dynamics of abuse and the approaches to dealing with it …. Most women who are targets of physical aggression generally experience multiple acts of aggression over time." For a comprehensive overview of the causes and impact of violence against women that includes these and other references, see UN Women's Virtual Knowledge Centre to End Violence against Women and Girls, available at: www.endvawnow.org/en/articles/300-causes-protective-and-risk-factors-.html.

53 OHCHR, *Discriminatory Laws and Practices and Acts of Violence against Individuals Based on Their Sexual Orientation and Gender Identity*, 2011, available at: www.ohchr.org/Documents/Issues/Discrimination/A.HRC.19.41_English.pdf.

54 C. Dolan, above note 5, p. 497.

component when we apply the term "GBV" to reference gender roles and norms related to masculinity and femininity. Dolan acknowledges this when he says that if, as his article advocates, "attention to sexual forms of GBV [against males and LGBTI groups] is extended to non-sexual forms, then this list will inevitably become somewhat lengthy".[55] In a preliminary aspirational brainstorm, Dolan's article includes sexual violence against men, purposeful emasculation, sex-selective massacres, violence against men and boys by landmines, abduction/ military conscription, being forced to commit atrocities against others, and evictions from accommodations and denial of work for LGBTI individuals.[56] An immediate reaction is to ask what forms of violence would *not* fit in this list. It is facetious to add: what about gang violence? Bar brawls? Any concept that is expected to cover so vast and diverse a list of instances of violence is simply unusable.

Taking one of the above types of male violence as an example, let us consider how sexual violence against men in conflict is framed by some as a problem of gender-based violence. This is probably the most common type of violence used when speaking of GBV against men and boys in humanitarian contexts. And indeed, this violence often has a "gendered" aspect, to the extent that it is strategically enacted in order to "emasculate" men – that is, deprive them of their "masculinity". But the link between this type of violence against men and GBV against women and girls ends there. Men aren't being sexually assaulted in conflict situations as an expression and reinforcement of gender norms that understand all men as the lesser and exploitable sex; this violence against men is about men in positions of power relative to other men (determined in these cases not by gender, but rather by guns or other sources of control) seeking to consolidate their power by targeting specific groups of men, typically because of political, ethnic and/or religious affiliation. The GBV we reference in relation to women and girls is about them being targeted by men based on their subordination to men according to patriarchal rules, institutions and practices. Ironically, "emasculating" men would not be so successful if male domination over women weren't so universally accepted – restoring a sense of "masculinity" essentially means restoring men to a confident position of not being women.

Another example might be massacres in which boys and men are the ones targeted to be killed, tortured, sent to concentration camps, etc. This is a powerful example of the problems that occur for some men who are on the wrong end of the patriarchal system at a given moment in time. Men are responsible for the militarization and institutionalization of violence, and this type of violence is an outcome of that. Again, this is not about men being targeted because of broad-based discrimination against them for being men; it is about men in particular social groups being targeted in order for their opponents to win wars.

Dolan himself highlights just how different his frame for violence against men is from the established frame for violence against women. Protesting that the

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55 *Ibid.*, p. 497.
56 *Ibid.*, p. 492.

current conception of GBV "assumes that it is subordinate status in society that creates vulnerability to violence", he suggests that the inverse can be true: men can be targeted for violence because they have a higher social status; men's assumed greater strength can make them more likely targets of military recruitment and abduction and sex-selective massacres; men's greater freedom to move makes them more vulnerable to landmines. Thus, men's power and control is a risk factor for the GBV that Dolan describes.

Rather than representing sound theory, it appears as if this is an opportunistic attempt to insert attention to men and boys under the GBV umbrella – and whether intentional or not, it is at the expense of women and girls. Dolan – and he no doubt has support for this analysis – concludes that GBV programmes fail to recognize that "men too can be rendered vulnerable by virtue of their gender".[57] It's not a failure in understanding. To articulate these concerns within the same theoretical frame of "GBV" is not only confusing, it threatens to reverse progress made in understanding and addressing the distinct determinants of violence against women and girls. According to former Special Rapporteur Rashida Manjoo,

> violence against men does not occur as a result of pervasive inequality and discrimination, and … it is neither systemic nor pandemic in the way that violence against women indisputably is. … Attempts to combine or synthesize all forms of violence into a "gender neutral framework" tend to result in a depoliticized or diluted discourse, which abandons the transformative agenda. A different set of normative and practical measures is required to respond to and prevent violence against women and, equally importantly, to achieve the international law obligation of substantive equality, as opposed to formal equality.[58]

In a move that appears to substantiate the concerns of women's rights activists that GBV work is being usurped and transformed by men in order to give heightened consideration to men's rights and needs, Dolan's critique avoids any specific discussion – or even acknowledgement – of how patriarchy informs violence against women and girls – unless one takes into account the assertion that "excluding" men and boys from GBV programming is itself a replication of the discrimination that women experience in the context of patriarchy.[59] This line of reasoning suggests that a focus on gender equality for women and girls actually leads to gender inequality for men and boys. How could that be? The very definition of gender inequality understands women as a disadvantaged group in comparison to males.

One tenable argument for the need to "go beyond" a focus on women and girls in GBV programming might be that the system of patriarchy which causes violence

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57   *Ibid.*, p. 495.
58   Rashida Manjoo, Report of the Special Rapporteur on Violence against Women, Its Causes and Consequences, A/HRC/26/38, May 2014, p. 17, available at: www.ohchr.org/EN/HRBodies/HRC/RegularSessions/Session26/Pages/ListReports.aspx.
59   C. Dolan, above note 5, p. 500.

against women no longer exists; thus we need to re-examine the framework. However, neither Dolan nor anyone else can make this argument. We have only to look at the data to understand that the patriarchal system is in full swing the world over.

Data affirm what we already know: that women and girls suffer sexual violence at higher rates than men and boys. But this is not the central point

Finally, we arrive to the third main theme I identify in Dolan's article: challenges linked to data. Data included in the 2005 Guidelines are identified as lacking insofar as several examples of rates of violence against women and girls were only estimates, "offered in a way that implies that they are clear and consistent enough to merit no further investigation".[60] Dolan's article also criticizes the 2005 Guidelines for presenting a global statistic on violence against women (one in three) as illustrative, even though, somewhat confusingly, the same is done in the Dolan critique with US and UK national statistics on sexual violence against boys.[61] In any case, the argument is also made that the phenomenon of underreporting creates an "unstable empirical foundation".[62]

The critique then shifts to what seems to be Dolan's primary concern related to the use of data: something referred to as "majoritarian"[63] thinking, in which the contention that women and girls are the primary victims of, for example, sexual violence results in funding and other support to services for females but not for males:

> The manner in which this assumed majority status of female victims becomes both the beginning of an extensive exploration of that victimhood and the end of any analysis of the impacts on and needs of the assumed minority of victims is extraordinary; no serious social scientist, no donor, and no committed humanitarian should allow so much action to be premised on such shaky empirical foundations.[64]

What the 2015 Guidelines say

At the time the 2005 Guidelines were published, there were limited data available on the scope of sexual violence against women and girls in conflict-affected settings.

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60 *Ibid.*, p. 494.
61 On p. 494 of his article, Dolan suggests that the 2005 Guidelines "draw on a global figure and apply it unquestionably to humanitarian emergencies". However, in a footnote on p. 492, Dolan similarly cites statistics from the United Kingdom and United States to illustrate the problem of sexual violence against boys: three in twenty and one in six respectively. Note also that the violence against women data cited to produce the one in three statistic comes from, among other places, settings that have been affected by conflict or disasters. For a review of data on violence against women, see WHO Department of Reproductive Health and Research *et al.*, above note 52.
62 C. Dolan, above note 5, p. 495.
63 *Ibid.*, p. 495.
64 *Ibid.*, p. 495.

Ten years later, the 2015 Guidelines include three pages of data from a total of twenty-one countries. The data come from a variety of sources, serving to round out a picture that the 2005 Guidelines was only beginning to draw. The problem of violence against women and girls is widespread in humanitarian emergencies – and it is not limited to, or even primarily, sexual violence. Intimate partner violence, trafficking for sexual exploitation and abuse, child and forced marriage, and female genital mutilation/cutting are likewise problems revealed in the data. The Guidelines also include data on sexual violence against men.

In prevalence studies where male/female comparisons can be drawn, the evidence confirms that women are at significantly higher risk for sexual violence by a non-partner (e.g., more than twice as likely in the Democratic Republic of the Congo (DRC); almost twice as likely in Côte D'Ivoire), and that they may also be exposed to high levels of intimate partner sexual violence (e.g., 45% in the DRC; 24% in Côte D'Ivoire).[65] Dolan concedes that the data "tend to confirm that overall more women than men are affected"[66] by sexual violence – and not by small margins. Compound that with the multiple other forms of violence which women and girls experience not only in the context of humanitarian emergencies but throughout their lives, and you have a global health and human rights crisis.

And yet, the 2015 Guidelines attempt to make clear that this is not a numbers game when it comes to attending to the needs of survivors or undertaking prevention efforts. As with the 2005 Guidelines, the humanitarian community is advised in the current Guidelines to "assume GBV is occurring and threatening affected populations; treat it as a serious and life-threatening problem; and take actions based on sector recommendation in these Guidelines".[67] The 2015 Guidelines (as well as key tools such as the World Health Organization's Clinical Management of Rape Survivors protocols) also set standards for service providers that support interventions for any victim, regardless of sex, sexual orientation, ability, etc.

GBV programming focuses on women and girls, so that's what the data focus on

The problem is not that data misrepresent females as the primary victims of sexual violence: the data do not. Women and girls are indeed primary victims of this violence. Nor is there any question that the humanitarian community should not overlook the problem of sexual violence against males because they are a minority of victims. As the 2015 Guidelines underscore, no victim should go unassisted. The issue is that this type of argument distorts the way many in the GBV community use data.

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65   See GBV Guidelines, above note 13, Annex 5, pp. 327–330.
66   C. Dolan, above note 5, p. 492.
67   GBV Guidelines, above note 13, p. 2.

Data – or conversations related to the data – have not been used in the Guidelines, or more broadly in the field, to argue for the exclusion of men. Instead, data have been used to bring attention to the particular problems of women and girls *because that is what our focus is*. When the GBV community talks about women and girls being "principally" or "disproportionately" affected by certain forms of violence, this is not to monopolize for them the benefit of care or to marginalize men. It is to do our job in bringing attention to the historically – and continuously – overlooked concern of violence against women and girls, and the social, structural and systemic dynamics of gender inequality that frame and make possible this violence.

Importantly as well, and as mentioned several times previously, GBV data confirm that the phenomenon of violence against females is different from the problem of violence against males. The data expose a global reality in which females are harmed by men repeatedly and in multiple ways because they are females, sexual subordinates in the gender relationship, with less power, less participation, less education, less livelihood, less money, less property, less recourse, less justice than males. This problem of gender inequality is often exacerbated in conflicts and can therefore heighten women's and girls' risk. Thus, it is not about numeric majorities versus numeric minorities linked to specific types of violence that the data suggest; it's about the need for support, care and justice for half the world's population who experience a specific and debilitating social problem.

Conclusion

The 2015 IASC GBV Guidelines accord attention to LGBTI populations and to men and boys, both as survivors of sexual violence and as agents of change. Nevertheless, the Guidelines focus largely on the problem of violence against women and girls, as this is at the heart of GBV work. While it is a positive development that the needs of male survivors and LGBTI populations in humanitarian settings have been brought into sharper focus as a result of the human rights approaches that underscore GBV interventions, it is a misrepresentation of GBV theory and practice to claim that males and LGBTI groups should attract equal focus in GBV programming. Vitiating the gender and GBV language in order to refocus the field towards attention to the needs of males and LGBTI populations is not likely to serve any of these groups effectively, least of all women and girls.

Instead, what is required in both spirit and deed is partnership by those whose focus is on the needs of men and boys and/or LGBTI populations generally with those working on violence against women and girls. Separate and specific work on violence against men – and on men's experience in patriarchy – is not only important in terms of addressing the needs of men, but can also add an important dimension to understanding how to create a more peaceful world for all. Separate and specific work on homophobia and violence against gender non-conforming people is also critical to supporting improved rights for all. True

partnership among different specialists can facilitate examination of the intersections and commonalities of different types of violence and survivor groups, to the potential benefit of everyone.

In this process, however, the GBV community's commitment to addressing violence against women and girls must not be undermined, but rather supported in its value and importance. And, similarly, the decades of feminist scholarship that inform our work must be respected and recognized, not ignored, denied or dismissed. It is well past time for a women-centred agenda to be received as legitimate, and those focusing on that agenda must not be subject to a replication of the gender-based discrimination against which they work. Only with this understanding can it be assured that we may all move forward towards complementary goals.

INTERNATIONAL
REVIEW
of the Red Cross

OPINION NOTE

Twenty years after Novye Atagi: A call to care for the carers

Christoph Hensch
Christoph Hensch is a former Executive Director of the Mandala Foundation and Independent Consultant. He was Head of Office at the ICRC surgical hospital in Novye Atagi in 1996.

Abstract

Working in the humanitarian sector as an aid worker has become a dangerous endeavour, with attacks against humanitarian workers becoming more common. In this personal story by a former head of office at an International Committee of the Red Cross (ICRC) surgical hospital, a short, violent encounter leads to a long journey of recovery. There is an important role for the community in supporting the healing process; the author suggests that an integral and collaborative involvement by organizations like the ICRC is effective in addressing the impact of violence directed towards humanitarian aid workers.

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In October 1996, I was appointed Head of Office at the International Committee of the Red Cross (ICRC) war surgical hospital in Novye Atagi, a small Chechen village south of Grozny in the foothills of the Caucasus mountains in the very south of the Russian Federation. The ICRC had opened the hospital here on 2 September 1996 in order to care for the war-wounded in the Chechen conflict. The delegation compound, which also contained the hospital, was a busy place, with a multitude of building projects going on at the same time. There was an international team of experienced medical staff running the hospital, and a number of supporting staff engaged in the construction and administration of the operations. Often the sub-delegation was visited by other supporting specialists working across all the Northern Caucasus delegations – for instance, those working on international humanitarian law dissemination or security. For security reasons, we were almost

exclusively confined to the delegation compound, and a humming social life developed among those who worked and lived there.

In the early hours of 17 December 1996, two and a half months into this mission, everything changed.

When I woke up that morning, it was dark in my room – almost. Lying in bed I could see a few strips of light reflecting on the wall, the streetlight from the courtyard shining through the blinds. There were also the sounds of voices and what seemed to be banging noises.

Immediately I thought of an incident that had occurred about two weeks earlier, when I also woke up at about 5am to the sounds of voices and footsteps. At the time, wondering if it was a late-night party, I got up and descended from my bedroom to see what was going on downstairs, and I walked straight into a burglary. A large group of armed men was in the process of carrying boxes of material out of the building, including radio equipment and computers. Once they noticed me, they forced me into a corner and onto the floor, kicked me a few times and finished with their business.

This time, however, something was different. I felt a sense of dread. Not knowing what I should do, I sat up in bed and started pulling on a pair of trousers. Before I could finish putting them on, the door opened and a dark figure walked into the room. In the dim light I perceived a person with a military-style jacket and a black balaclava on his head. Immediately I thought of the most severe threat that I could imagine: kidnapping. I thought that resistance would be futile and decided to go along with whatever would happen next. The figure couldn't approach me to more than about three meters, because there was a table in the middle of the room, somewhat obstructing his access. So, I lifted up my hands to about shoulder height and said something like, "OK, OK…"

Looking at the person, the next thing I saw was him pulling his right hand out of the pocket of his jacket, and pointing a gun at me – then and a red-and-yellow flash of light erupted. Almost instantaneously I felt a piercing pain in my shoulders, seemingly hot and cold at the same time. Instinctively I moved my hands to where the pain was, letting myself fall back onto the bed, turning to the wall. In what seemed to be an eternity, I started wondering what would happen next. What should I do? Without seeing him, I imagined that the person would approach me and walk up to my bed. If so, should I fight back? When nothing happened immediately, and I couldn't think of any successful course of action, I remembered to calm my mind, and I started a simple meditation routine, repeating a short mantra and simply resigning myself to go with the flow of whatever might happen.

Over another seemingly endless stretch of time, I listened to the sounds of mayhem in the building – gunshots, heavy banging on doors, occasional shouts and crying, until they started to fade away. I do not know how long I was lying there, eyes closed, holding my shoulder and listening. Maybe it was minutes only, but it felt like a space outside of time. It was still more time before I dared to move my body. Clearly nobody was in my room any more.

Slowly my intense awareness of my surroundings started to weave together, as the radio sprung to life with voices calling out, at random at first, but soon

connecting in exchanges and conversations. Gradually the horrific proportions of the massacre of international medical personnel at the Novye Atagi hospital, who were murdered intentionally and in cold blood, became apparent. It was only then that I realized the assailant had intended to murder me too but had left me for dead, and that I had miraculously survived the ordeal. The sparkling blue sky over the calm, snow-dusted landscape of this rising winter morning stood in crass contrast to the bloody mayhem this place had just experienced.

That day, six ICRC delegates were shot dead in cold blood by unidentified gunmen in their quarters at the hospital in Novye Atagi. Their mission had been peaceful and humanitarian. They were:

- Fernanda Calado, an ICRC nurse of Spanish nationality;
- Hans Elkerbout, a construction technician seconded from the Netherlands Red Cross;
- Ingeborg Foss, a nurse seconded from the Norwegian Red Cross;
- Nancy Malloy, a medical administrator seconded from the Canadian Red Cross;
- Gunnhild Myklebust, a nurse seconded from the Norwegian Red Cross;
- Sheryl Thayer, a nurse seconded from the New Zealand Red Cross.

There were thirteen other expatriate workers present at the sub-delegation that night. Those colleagues of mine had all also been potential targets of the assailants.[1] They were either safely behind locked and sturdy doors in their bedrooms, or sleeping in other buildings within the compound. They survived with emotional and psychological scars. They, too, carry the memories of hearing the shooting, banging, shouting and crying during the attack, as well as the visual impressions of the aftermath, finding their dear colleagues murdered in a bedroom near to their own. They also carry the memories of the fear and helplessness, and perhaps also guilt, that they felt in a situation where it was impossible to intervene and protect someone close to them.

This is the story I usually tell when someone asks about what happened. Many other people will have a story from that day. Some have an up-close experience of the event, while many more were touched from afar. Each of these stories is unique and worth listening to.

The other story

I have another story to tell, one that is closely linked to the one above, and which is just as important. It is a much less sensational story. It is drawn out, long, difficult and seemingly without end. It is the story of recovery and healing. Writing this article has become part of that story. The story is very personal, and I suspect that many of us live a similar story of recovery and healing from physical, mental and/or emotional hurt and injury.

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1   There were also several local staff members in the compound that night, but when they encountered the attackers, they were told to stay away and that the attack was exclusively directed at the expatriate workers.

It is the story that began the moment the first story finished.

On that early December morning in 1996, it took me some time to realize what had happened to me and others around me. During the first twenty-four hours, I felt that both the worst and the best sides of humanity were revealed to me. Once my colleagues discovered me in my room, lying in my bed, injured, there was not a minute where there was not someone present next to me, someone in touch – literally. Feeling that

> **Trauma** is an emotional response to a terrible event like an accident, rape or natural disaster. Immediately after the event, shock and denial are typical. Longer term reactions include unpredictable emotions, flashbacks, strained relationships and even physical symptoms like headaches or nausea. While these feelings are normal, some people have difficulty moving on with their lives.[2]

caring presence, with a hand on my arm or shoulder all the time, gave me a sense of grounding and infinite safety. I'm still grateful today to the nurses and all the others who accompanied me on that first day. But that sense of grounding, connectedness and presence started to evaporate only about twenty-four hours later, once I had arrived at the hospital in Geneva where the bullet was removed from my body.

The clinically clean and empty space at the hospital soon started to make me feel alone and cut off, and left me pondering thoughts that I wished I could have shared or developed with others. The emptiness of the next five days was only occasionally punctuated by short visits and reports of heartfelt ceremonies at the airport and at the cathedral, commemorating the deaths that occurred at the horrible event – ceremonies I could not be part of. It was an important time for other survivors to congregate, to find meaning and answers, to talk, and to mourn.

My rational mind understood: I had an injury, my lung was punctured, the doctor said that I needed rest and should not overexert myself. The deeper layers of my being, however, had a craving, and needed a different medicine than what I had received in my isolated hospital bed.

Thus started my next journey – that of healing and recovery. It is a journey during which I travelled in the dark for a long time, left entirely to myself to make sense of what I had experienced; one where I certainly learned a lot, yet whose purpose long escaped me. When I think and talk about this story, I feel vulnerable and it seems to be very self-centred. It was difficult to find a helpful community that would support me.

Today I feel strong enough to share this story. This story is important because many humanitarians experience trauma and while I cannot speak for others, connection (or lack thereof) with my group and community has been the recurrent and defining theme of my journey of healing and recovery.

Looking back, I realize how helpful a collaborative approach to healing from trauma could have been for me. In this opinion note, I will share some of the milestones of my journey. I will then propose and discuss an integrated

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2   There are many different definitions of trauma. This one is from the American Psychological Association website, available at: www.apa.org/topics/trauma/ (all internet references were accessed in November 2016).

approach to addressing stress and trauma, whereby organizations can better support their staff comprehensively, through objective support, an improved systemic environment, the internal organizational culture and the allowing of subjective experience of the recovery by the individual.

Healing and community

Judith Lewis Herman, in her book *Trauma and Recovery: The Aftermath of Violence – From Domestic Abuse to Political Terror*, explains:

> Traumatic events destroy the sustaining bonds between individual and community. Those who have survived learn that their sense of self, of worth, of humanity, depends upon a feeling of connection with others. The solidarity of a group provides the strongest protection against terror and despair, and the strongest antidote to traumatic experience. Trauma isolates; the group re-creates a sense of belonging. Trauma shames and stigmatizes; the group bears witness and affirms. Trauma degrades the victim; the group exalts her. Trauma dehumanizes the victim; the group restores her humanity.[3]

On 17 December 1996, I was part of a group and community that felt like a big family: the ICRC. That community, as a collective, suffered a trauma as well on that day. It was an unprecedented and unprovoked act of violence against the organization and its workers. That trauma was difficult to deal with, and is often seen as a turning point that signalled the start of a period of decreasing security for the International Red Cross and Red Crescent Movement (the Movement) and the humanitarian sector in general.

What I felt for the first time on the day I returned to Geneva has over time become a pervasive reality, again sometimes punctuated by very meaningful events of belonging. In fact, the relationship with my employer at that time, my community, has been far from harmonious over the years. My belonging to the ICRC has been put into question many times, and a sentence from a recent email by one of the organization's representatives probably reflects the organizational response to my attempts at "belonging" quite succinctly: "[T]he fact that he has not gotten in touch with you means that there is no concrete proposal for collaboration that could be envisaged at this stage."

While the "he" in this sentence refers to a particular person within the ICRC, the communication struck me as coming from the organization as a whole, and I felt that it could just as well have said "the fact that *we* have not gotten in touch …". This statement not only seems to encapsulate a response to a concrete proposal, but in my view also succinctly reflects the sense I have picked up from my employer over the years at my attempts to obtain the organization's participation in a collaborative approach to healing from trauma.

3   Judith Herman, *Trauma and Recovery: The Aftermath of Violence – From Domestic Abuse to Political Terror*, Basic Books, New York, 1992, p. 214.

The fact that the statement above is still painful shows that both the organization and I are still on a journey of recovery. If recovery and healing cannot start or are interrupted, our lives will become internal warzones, where injury after injury and trauma after trauma will occur, and finding peace will be a very challenging task.

This is not to assign blame. I think that at the time all those involved did their best, and in the best way they knew how. I started out, initially, completely trusting that my employer knew what to do and how to help, and that it would point me towards the right direction, supporting me along the way. However, I soon found out that this was by no means the case.

I had no idea what to expect. My first focus was on getting my physical health back, to have my punctured lung functioning again and in general to regain my strength. On a deeper level, things were much less clear. I often felt vulnerable, disempowered and misunderstood. I was not quite able to communicate what I needed, beyond the restoration of my physical health.

While I progressed in getting back my physical health, the effects of post-traumatic stress disorder (PTSD) seemed to arise more often. At unexpected moments my body reacted to triggers, although seemingly without cause: breaking into a sweat, blocking my ability to talk without becoming emotional, feeling an unexpected loss of energy, shaking, and so on. The most difficult time of the day was going to bed, falling asleep and letting go of control, because it was during the night that the trauma had happened. How could I sleep without locking the door, or without listening to the sounds in the corridor, or elsewhere in the building? However, once I did fall asleep, I seldom dreamed about the event. The effects of PTSD can be extensive, are individually different, and have been well documented.[4] Without help, this is a difficult part of the journey to navigate.

It was only much later that I decided to seek professional help, and it was even further down the path that I started to perceive it as a learning and healing journey. It took time to gain insights from my contemplation of the meaning of life and death and forgiveness. At first, anger and then frustration were long-time companions on this journey.

At the very beginning, I set the intention that this experience would ultimately have a positive effect on my life, and on the lives of others. Yet it took many years before I could see this intention as anything more than wishful thinking.

There have been many milestones along the journey – ups and downs. Over the years I worked myself through the different stages, in my own perspective and in the perspectives of others, from "victim" through "survivor" to "normal" – whatever the meaning of "normal" is. And yet still today, I often feel cautious talking about this healing journey for fear that it will be held against me.

What follows are some of the most significant milestones over the last twenty years which have marked my life.

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4 For more information, see "Symptoms of PTSD", Anxiety and Depression Association of America, available at: www.adaa.org/understanding-anxiety/posttraumatic-stress-disorder-ptsd/symptoms.

The investigation. What did really happen at Novye Atagi? And why? What were the consequences? I am sure an investigation took place – yet I neither had the opportunity to contribute to it in a meaningful way, nor the chance to read any resulting reports or discuss the outcomes, information I do not have, with anyone at the organization. Not so much today, but for a long time I felt that it would help me make sense to know more of the background information of the incident.

Deciding I needed help. I would have happily gone on another mission relatively quickly to a place which was reasonably safe. Yet coordination of that mission proved difficult, and going to a dangerous place soon after being shot in Chechnya did not seem right somehow. Then, when finally my mission was confirmed (and changed at the last minute), about eight months later, I noticed symptoms of PTSD that made me question the choice to leave for another mission. I noticed that I had lost that deep sense of grounding which I previously used to have; the sense that gave me direction in life and enabled me to make sensible decisions and evaluate safety and danger around me. That was the point at which I knew I needed help.

Resignation. Psychological help then revealed that in fact I had accumulated a lot of anger against my employer, who simply was not present as an active participant in my trauma recovery. But who to tell? Who would listen and understand? After a few attempts to communicate, I felt that as a last attempt to attract attention, I should send a letter of resignation. This was probably one of the most hurtful episodes of all, because nobody seemed to notice except for the intern at human resources who dutifully checked my bank account to insure the final payment did not get lost. Nobody engaged in a meaningful conversation, or wondered why, after having taken a bullet for the organization and being eager to deploy again, I now would be resigning. Maybe it was already true, then, that "the fact that [the ICRC] has not gotten in touch with you means that there is no concrete proposal for collaboration that could be envisaged at this stage". At that stage, the proposal would have been my healing and recovery, and with some imagination, the healing and recovery of the ICRC as well.

Going on another mission. It would take me a number of years to realize that there were loose ends which prevented me from moving forward professionally. I felt that something was incomplete. Finally, I worked up enough clarity to realize that in fact, on some level, I had never fully completed my mission in Novye Atagi; that I had never emotionally finished that assignment. With that clarity in mind, I took the initiative to request another mission – on my own terms. It was granted, and I spent six months in the field. At the end I returned and concluded the mission like any regular assignment. Not only did this allow me to find a sense of self-empowerment, but it also allowed me to conclude that sense of limbo of an unfinished employment relationship.

The tenth anniversary. The next milestone happened close to five years later. At this stage, I tried not to think much about my experiences and to get on with life. However, when I was contacted regarding a ten-year anniversary event, I felt a strong reaction – going from rejection to seeing an opportunity for further recovery with a community to which I still felt a strong sense of belonging. It was

an opportunity for a review of the impact of this event on my life – physically, psychologically, emotionally, spiritually and economically. The ten-year commemoration event eventually provided me for the first time, unwittingly, with a platform at the ICRC for sharing my personal experience with other members of the ICRC community. For the first time I felt that some significant pieces of the puzzle were coming together – personally and emotionally. Meeting others from the ICRC who had their own story of Novye Atagi felt very healing.

The awarding of the Henry Dunant Medal. Shortly after the ten-year anniversary, that milestone was followed by another one – the awarding of the Henry Dunant Medal in 2007.[5] It felt that finally my intentions for an ultimately positive outcome had started to manifest themselves. This medal was an unprompted recognition of what I had been going through and an acknowledgement of my belonging to the wider Red Cross and Red Crescent community. Psychosocially, it was certainly a huge step forward for my healing and recovery journey. It meant that for the first time I could talk about my injury and the associated trauma without feeling it was a liability. Now, I could potentially start to make my experience into an asset.

Returning to the humanitarian sector. It would take another four years before I felt strong enough to actively start working on the issue of stress, burnout and trauma in the humanitarian sector. When the opportunity came, I thought long and hard before accepting the challenge of leading the Mandala Foundation in Melbourne, a non-governmental organization (NGO) dedicated to the psychosocial well-being of aid workers. My next experience was working in a human resources function with Australian Red Cross, coordinating field missions to conflict and disaster areas. Both roles were important contributions to my healing journey, and opportunities to start giving back. When I got the chance to inspire and help lead the first event of recognition for Red Cross workers that were killed in the field on 17 December 2014 at Australian Red Cross, it finally seemed that a circle had closed itself and, like the satisfaction of a deep craving, other pieces of my scattered self fell into place.

Looking back, those are events that loom large in my memory. Yet in between there were long periods when life felt as if it were taking two steps forward and one step back – sometimes even one step forward and two steps back. As for belonging to the ICRC and the wider Movement, I seem never to have achieved any continuous and lasting process of collaboration.

My journey and that of the organization seemed to move on parallel lines, and as in a true parallel, the lines did not touch except at certain events as outlined in the list of milestones above. There was very little time invested in helping each other to understand what was happening and making sense of that horrific event. Very little time was spent walking next to each other, supporting each other.

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5   Editor's note: The Henry Dunant Medal is the highest award given by the International Red Cross and
     Red Crescent Movement. It is presented every two years by the Standing Commission of the Red Cross
     and Red Crescent to acknowledge outstanding service and devotion to the Red Cross and Red Crescent
     cause. For more information, see "The Henry Dunant Medal", Standing Commission of the Red Cross
     and Red Crescent, available at: http://standcom.ch/the-henry-dunant-medal/.

Individuals have to live their journey by themselves – and the collective deals in its own way with traumatic events that impact it, although the collective is ultimately made up of individuals with their own personal feelings and experiences. I know very little of how the collective (meaning the ICRC as an organization) dealt with the shock, the pain and the trauma of Novye Atagi, for example.

I do not make any claim to special treatment because I was a "victim" or "survivor". I suspect that there are many Red Cross delegates who have had horrific and traumatizing experiences during their career. And I suspect as well that they also need a sense of belonging to the wider community on their journey of recovery. How is the ICRC living up to its responsibility to be the community that helps the individual regain his or her health and humanity?

I do experience a great reluctance by the organization to engage in any activity that looks at the deeper emotional and spiritual hurt that is caused by the violence witnessed and experienced in the field. Whenever I speak up I sense a resistance, like an invisible barrier going up, as if there is a great reluctance to hear my voice and as if people do not want to look at this side of the humanitarian action coin. Maybe this is because it does touch a nerve in so many humanitarians. How do we reconcile our personal feelings with the imperatives of the humanitarian and organizational mission and principles?

Today: Addressing the inherent stress of humanitarian work

It has been a big challenge for me to write this piece. The writing process has been a journey in itself. A few times I figured that it was just too difficult to write about something so personal, and I was tempted to give up.

But why is it important to talk about this? This story is about more than what happened twenty years ago; it is also more than my personal experiences of recovery. There are many others who have dedicated themselves to what they see as a noble cause: helping to ease suffering in a humanitarian context. But they have ended up suffering themselves.

Humanitarian work is inherently stressful. People working in the sector are sometimes exposed directly to traumatic events, but more often indirectly. Indirect exposure is also known as vicarious traumatization. According to studies, humanitarian aid workers have a much higher occurrence of PTSD than the average population. Up to 30% of aid workers suffer from PTSD in different ways.[6] The effects of PTSD can arise weeks, months or sometimes even years after the initial experience.

Statistics about security incidents do not paint a good picture. The security incident data published by the Aid Workers Security Database suggests that as of 9 October 2016, there were 120 victims of major attacks against aid workers in 2016 alone.[7]

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6   Antares Foundation, *Managing Stress in Humanitarian Workers: Guidelines for Good Practice*, 3ed ed., Amsterdam, 2012, available at: www.antaresfoundation.org/FileLibrary/file6782.pdf.
7   Aid Worker Security Database, Humanitarian Outcomes, 2016, available at: www.humanitarianoutcomes. org/awsd (data not verified).

Nor does the news. In 1996, attacks of the nature and scale of that perpetrated in Novye Atagi, where aid workers were deliberately targeted and killed, were very uncommon. Today, twenty years later, the situation seems sadly to have dramatically changed in this regard. Although the number of humanitarian workers injured and killed is not quite as high as it was in 2013, recent times have seen a number of horrific events where humanitarian operations were targeted, seemingly intentionally. Examples that made headlines in the media are:

- On 3 October 2015, a Médecins Sans Frontières hospital in Kunduz, Afghanistan, was attacked by an American airplane.
- During 2015 and 2016, an unprecedented number of medical facilities in Syria and Yemen were attacked and destroyed.
- On 1 July 2016, soldiers entered a hotel in Juba, South Sudan, and raped and harassed aid workers who were seeking shelter from fighting.
- On 19 September 2016, an aid convoy of lorries was bombed from the air in Syria.

The statistics only record those who have directly experienced an incident, as does the news. They do not take into account those aid workers who experienced trauma vicariously, at headquarters, and as friends or family members. Some know those who are killed, injured or kidnapped personally. Colleagues might be at other locations around the globe, and might have been involved in leading, coordinating or otherwise supporting operations from a distance. All will feel an impact, and nothing can give consolation to those who lose close family members.

There seems to be considerable disagreement as to whether the story of post-traumatic life can ever have a positive outcome,[8] yet with such a large proportion of the workforce potentially affected, it is imperative that aid agencies take the impact of trauma very seriously.

There are a number of questions that arise:

- What are the responsibilities that aid agencies are faced with today?
- How does the humanitarian sector deal with such attacks on itself and its workers?
- What does it really mean to have a "duty of care"? Are organizations improving their practices principally due to legal liabilities – both under work health and safety laws in certain countries, and under the threat of lawsuits brought against them?
- Who will pay for the additional costs generated by the requirement to safeguard the psychological well-being of aid workers?
- What is the best approach – proactively dealing with the emotional and mental well-being of aid workers or repairing the damage after it has occurred, the proverbial ambulance at the bottom of the cliff?

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8   See Mark Snelling, "Understanding Post-Traumatic Growth", *Interhealth Worldwide*, 21 August 2013, available at: www.interhealthworldwide.org/home/health-resources/health-alerts/2013/august/21/understanding-post-traumatic-growth/.

Campaigns, such as Health Care in Danger,[9] that attempt to raise awareness and commitment to protecting humanitarian operations in the field are important. There were also attempts to raise the issue of staff wellness at the 2016 World Humanitarian Summit (WHS) in Istanbul. On 30 July 2015, the International Association of Professionals in Humanitarian Assistance and Protection organized a global online consultation event on the issue and published a report of the outcomes.[10] Yet the fact that the issue of aid worker well-being was not granted a suitable platform at the recent WHS shows that there is a need for action on the side of agencies and NGOs working in dangerous environments.

An integral approach to addressing stress and trauma

There are many different possible ways in which the impact of violence on aid workers can be addressed, and in my opinion we have come a long way over the last twenty years in terms of the awareness of that impact as well as the variety of methods available. However, there is no one solution that fits all. We all tend to solve challenges from particular points of view corresponding to our own positions, and can overlook alternatives which can add to the effectiveness of already existing measures. While these methods are all different and sometimes seem contradictory, they are all necessary and could provide a rich set of responses, complementing each other. Similar support mechanisms are also advised for people working in natural disaster response, as suggested in a study by Jolie Wills from New Zealand Red Cross.[11]

I would like to propose a holistic approach that could best be called integral.[12] It has following components:

- objective support through professional services;
- adaptation of the systemic environment;
- an aware and caring organizational culture; and
- enabling the subjective experience.

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9   Editor's note: The Health Care in Danger project is an initiative of the International Red Cross and Red Crescent Movement aimed at addressing the issue of violence against patients, health-care workers, facilities and vehicles, and ensuring safe access to and delivery of health care in armed conflicts and other emergencies. For more information, see the website available at: http://healthcareindanger.org/?WT_srch=1&gclid=CMnHlpSxy9ACFSQz0wod_UcDCw.
10   The recordings of the event, and the resulting report to the UN Secretary-General, are available for download at: https://phap.org/civicrm/event/info?reset=1&id=302.
11   Jolie Wills, *Supporting the Supporters in Disaster Recovery*, Winston Churchill Memorial Trust and New Zealand Red Cross, 2014, available at: http://supportingthesupporters.org/images/Supportingthesupporters JWILLS.pdf. The report was established to support community workers after the 2010 and 2011 earthquakes in Christchurch, New Zealand.
12   The proposed approach is based on an interpretation by the four-quadrant system under the philosophy of Ken Wilber. See, for example, Ken Wilber, *Introduction to the Integral Approach (and the AQAL Map)*, 2006, available at: www.kenwilber.com/Writings/PDF/IntroductiontotheIntegralApproach_GENERAL_2005_NN.pdf.

Elements of each of these components need to be present in order to comprehensively address the challenge of employers dealing with the short- and long-term impacts of stress, burnout and trauma.

Objective support

For many, the most obvious way to address psychological and emotional stress and signs of trauma is to "treat" affected individuals and provide professional services. What does this mean?

> *The organisation provides itself, or makes accessible through others, support services including psychological counselling as well as alternative methods as appropriate, offering them to the individual to help deal with the impact of stress, burnout and trauma. That can also include mentoring and coaching.*

Twenty years ago, the concepts of PTSD and psychosocial support were not very well known and there were few trained professionals. Since 1996 there have been big developments. Not only have there been a number of studies conducted that looked at the psychological impact of aid work,[13] but there has also been a shift in how mental health is looked at in general, and a huge increase in acceptance of alternative ways of looking at mental well-being. Practices such as mindfulness, meditation and yoga, for example, have become all but mainstream.

It is important to help increase people's resources and resilience instead of labelling their mental state, analyzing and pathologizing it. Today, those who have gone through difficult experiences are called "survivors" rather than "victims". This is a development in the right direction, but it is still a label. An even more successful approach would be not to pathologize aid workers who have gone through hard experiences at all, but rather to provide services to all as a matter of course. Today there are specialized psychological service providers that are familiar with the humanitarian sector and provide appropriate services.

Systemic environment

Stress is not only a problem caused by external influences, it is also to a large extent an internal problem. Studies have shown that even in an environment of war, the stress inherent in the subordinate–superior management relationship is more severe, with a higher impact, than all the stresses produced by the threat of violence and general insecurity.[14] On my personal journey, the stress I

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13 Barbara Lopes Cardoso *et al.*, "Psychological Distress, Depression, Anxiety, and Burnout among International Humanitarian Aid Workers: A Longitudinal Study", ed. Monica Uddin, *PLOS One*, Vol. 7, No. 9, 2012, available at: http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0044948; Courtney E. Welton-Mitchell, *UNCHR's Mental Health and Psychological Support for Staff*, UNHCR, Geneva, 2013, available at: www.unhcr.org/research/evalreports/51f67bdc9/unhcrs-mental-health-psychosocial-support-staff.html.

14 The Antares Foundation bases its *Managing Stress in Humanitarian Workers: Guidelines for Good Practice*, above note 6, on its own research. See the organization's website, available at: www.antaresfoundation.org/guidelines#.WD__tfkrJhE. See also the Mandala Foundation guidelines, which

experienced in dealing with my employer over the period of the past twenty years far outweighs the stress I experienced on the field.

Policies, procedures and processes are aligned and congruent across the organisation and the wider sector, providing an organisational context that effectively deals with the impact of stress, burnout and trauma on its members and on organisational effectiveness.

It is therefore essential that any organization which is active in a conflict area has its own house in order. Part of this involves having comprehensive policies, procedures and operating standards in place that reflect the duty of care of an employer for its staff.

Those documents should cover all aspects that contribute to physical and psychosocial health, such as:

- stress policies;
- security protocols;
- staff health guidelines;
- human resources procedures;
- staff management; and
- organizational structure and responsibility.

Other questions to ask are: Are aid workers leaving for the field suitably prepared? Do they have sufficient personal competencies in dealing with pressure and lack of resources, as well as unfamiliar environments and cultures?

There needs to be clarity about who is in charge of the different aspects of staff safety and well-being. My own experience has been that I was facing a large organization which was struggling to live up to its role as a compassionate employer. Especially in the early days after the incident in Novye Atagi, it was difficult to know who my contact persons were for any specific issue, and I was regularly referred from one person to the next, and to the next. This is an additional burden that should not have to be shouldered by someone already dealing with the impact of stress and trauma.

There are an increasing number of resources, organizations and consultants that work on this field, many with humanitarian aid work experience themselves. They provide training and other specialist services.

Organizational culture

Organizational culture is something that is hard to define. It is something that is different everywhere. In its most rudimentary form it refers to the underlying

put a strong emphasis on management and human resources activities. Mandala Foundation, "Managing Psychosocial Risk across the Assignment Cycle: Guidelines for Psychosocial Staff Support in the Humanitarian Aid and Development Sector", available at: www.mandalafoundation.org.au/psychosocial-resources/guidelines-managing-psychosocial-risk/.

values in an organization, and how things are done. It tells individuals what is appreciated and what is expected.

The recognition afforded to humanitarian workers is part of this culture. The regular commemorations on 17 December are an excellent example. What other organizational activities are there that acknowledge the difficult and challenging tasks delegates encounter in the field? How do we support each other in making sense of what we encounter? How do we value the human beings who currently work for the Movement, and those who have in the past? How does the ICRC acknowledge those who belong, and what are the underlying values we share? Telling stories and celebrating achievements is essential.

Another important aspect is peer support. Peer support groups have existed in many different contexts for a long time. Since internal support structures are often weak, humanitarian workers have started to self-organize across the sector, and have started to use social media platforms to connect with each other.[16] Another cross-sector response is the Peer Coaching Pilot that WhyDev ran in 2012/13.[17] One of the outcomes citied for the participants was "feeling less stressed and isolated".[18]

> *We, as members of the organisational environment in which the individual is embedded, provide peer support mechanisms and explore the meaning of humanity and the collective impact of violence against ourselves and our co-workers as part of our work in the environments where we are active. This includes exploring the shared assumptions, values, and beliefs which govern how people and the organisation as a whole behave in a given situation.*

> *We need an organisational culture that values human beings beyond humanitarian slogans, and leads by example.*[15]

Subjective experience

Last but not least is the subjective experience of the person who experiences stress, burnout or trauma. In many ways this is the most challenging of the four components. How, as humanitarians, do we in good conscience pay attention to our own needs in a world where there are so many needs of others to address? The suffering of others is (almost) always more important than our own. For

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15 Alessandra Pigni, "Forget Work-Life Balance!", *Mindfulnext*, available at: http://mindfulnext.org/forget-work-life-balance/.

16 For example, on Facebook there is a closed group called "Fifty Shades of Aid", with more than 8,000 members, that sometimes serves as a spontaneous peer support platform. Access by invitation only.

17 Brendan Rigby, *WhyDev Peer Coaching Pilot Program 2012–13: Final Report*, WhyDev, 2013, available at: www.whydev.org/peer-coaching/.

18 *Ibid.*, p. 6.

most of us, it is one of the most important reasons why we became involved in this kind of work in the first place.

As an organization, the ICRC needs to be open to everyone having a different reaction to stress and trauma. Some may suffer quietly, some will self-medicate. Many will hesitate to admit that they suffer from trauma for fear of losing their dream job. This will be especially true if other components of an integral response are not

> *The individual humanitarian her or himself engages directly with the thoughts, emotions and perceptions caused by a prior incident or an ongoing situation and finds subjective meaning and personal healing from stress, burnout and trauma. The individual has both a supportive environment or community and sufficient economic means to engage in his recovery.*

appropriately developed, and if signs of weakness are interpreted as a pathology. If this is the case there is a danger that a culture of silence may develop, to the detriment of both the individual and the organization.[19]

Without the cooperation of the individual suffering due to a traumatic experience, all the other work will ultimately have only a limited impact. However, if there is sufficient information available about professional and alternative support options both inside and outside of the employing agency, then humanitarian workers are more likely to engage and ask for this kind of support. Furthermore, if there are clear policies, safety procedures and so on, then humanitarian workers are less likely to suffer from stress, burnout and trauma in the first place. Last but not least, if there is a welcoming and respectful organizational culture, then we, as humanitarian workers, will be more trusting and honest about our own situation and the state we are in, and are less likely to deploy to the field when we are not in a fit state to do so without fearing dismissal as a consequence.

Conclusion

On a personal level, my journey of recovery is ongoing, although on a much more subtle level. I have developed a sensitivity for situations where staff well-being is impacted not by maliciousness, but maybe by ignorance. Some time ago I started curating news reports and other internet sources pertaining to psychosocial staff health issues in the humanitarian sector,[20] and this has revealed a darker side to humanitarian work.

While I feel that I had little support in terms of a community around me, there were nevertheless significant events where my path and that of the ICRC and/

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19   See, for example, Holly Young, "Guardian Research Suggests Mental Health Crisis among Aid Workers", *The Guardian*, 23 November 2015, available at: www.theguardian.com/global-development-professionals-network/2015/nov/23/guardian-research-suggests-mental-health-crisis-among-aid-workers.
20   Support for Humanitarian Aid Workers, maintained by Christoph Hensch, available at: www.scoop.it/t/psychosocial-support.

or the wider Movement crossed, and those events always contributed immensely to my recovery.

The invisible costs that individual humanitarian workers are paying can be immense: working in insecure environments and experiencing and witnessing acts of violence and the suffering they cause can have adverse and devastating impacts. A recent survey by *The Guardian* revealed that up to 79% of aid workers surveyed experienced mental health issues as a result of their work.[21] Nearly one third of all aid workers suffer from trauma – several times the rate of the general population, according to a study by the Antares Foundation.[22]

These studies reflect my personal experience. It took many years to make sense of what happened to me and my colleagues on that fateful day twenty years ago, and to overcome the effects of PTSD. From my perspective, the initial experience of being shot was a trigger to a much longer experience of recovery, which was much more prolonged and painful than it needed to be. The biggest failure that occurred along the way was the inability to establish a fruitful process where both the individual and the community co-created a healing journey. Even now, twenty years later, I acutely feel the need to belong, arising from a craving to heal an injury that I have sustained on behalf of a much larger community.

From an organizational perspective, and as outlined earlier, there is much that can be done to address the impacts of stress and trauma. It would benefit any organization or NGO to build an internal culture of care and healing based on humanitarian principles. Why? Jolie Wills[23] puts it quite simply: first, it pays; second, it's risk management; and third, it is ethically simply the right thing to do.

I suggest that an integral approach to dealing with stress, burnout and trauma should become a standard operating principle in the humanitarian sector for employers in dealing with their workers. I also suggest that employers in the humanitarian sector create and implement collaborative processes and become conscious and proactive partners in the healing journeys of their staff who have been impacted by injury and trauma while working for the institution and on behalf of humanity as a whole.

21   See, for example, H. Young, above note 19.
22   Antares Foundation, above note 6.
23   See: http://supportingthesupporters.org/index.php/why-support.

INTERNATIONAL
REVIEW
of the Red Cross

NOTE

Strengthening compliance with IHL: The ICRC-Swiss initiative

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Abstract

Lack of compliance with international humanitarian law (IHL), or insufficient observance of its rules, is probably the greatest current challenge to the continued credibility of this body of international law. The need to strengthen respect for IHL led the ICRC and Switzerland to facilitate unprecedented consultations among States between 2012 and 2015 focused, specifically, on improving the efficiency of mechanisms of compliance with IHL. This note outlines the background of the initiative and summarizes its course and outcome. Ongoing work in the current phase of the process, agreed to at the 32nd International Conference of the Red Cross and Red Crescent held in late 2015, is also very briefly indicated.

Keywords: compliance, respect, compliance initiative, mechanism, IHL, international humanitarian law.

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*   Jelena Pejic was the author of the Concluding Report of the Swiss-ICRC initiative, entitled "Strengthening Compliance with International Humanitarian Law" submitted to the 32nd International Conference of the Red Cross and Red Crescent in 2015 (see note 12 below). With Jonathan Cuénoud and, subsequently, Rochus Peyer, legal officers in the Directorate of International Law of the Swiss Federal Department of Foreign Affairs, she likewise drafted the Background Documents for, and the Chairs' Conclusions of, the nine Meetings of States, including the preparatory discussions, organized as part of the initiative between 2012 and 2015. These documents are available on the websites of the ICRC and of the Swiss Federal Department of Foreign Affairs, respectively (see note 10 below).

Introduction

Lack of compliance with international humanitarian law (IHL), or insufficient observance of its provisions, is probably the greatest current challenge to the continued credibility of this body of international rules. The need to strengthen respect for IHL led the International Committee of the Red Cross (ICRC) and Switzerland to facilitate unprecedented consultations among States between 2012 and 2015 focused, specifically, on improving the efficiency of mechanisms of compliance with IHL. The main purpose of this text is to outline the background of the initiative and to summarize its course and outcome. Ongoing work in the current phase of the process, agreed to at the 32nd International Conference of the Red Cross and Red Crescent[1] held in late 2015, is also very briefly indicated.

Background to the ICRC-Swiss initiative

States and other relevant actors generally agree that, regardless of the evolution in the nature of armed conflicts, IHL remains an appropriate international legal framework for regulating the conduct of the parties to such conflicts and providing protection for the persons affected. Since 1864, when the first Geneva Convention was adopted,[2] great strides have periodically been made to adapt and update the normative content of IHL, whether by means of treaties or customary law. What has remained perplexingly absent is the corresponding development of mechanisms to strengthen compliance with IHL that are unique to IHL. While the rules of this branch of international law aim to prevent or put a stop to human suffering caused by armed conflict, and to deter violations, the norms cannot, in and of themselves, bring about respect and eradicate abuses, nor can they be expected to do so. They need to be complied with.

Compliance, in the broadest meaning of the term, requires a multifaceted effort encompassing a range of activities by a multitude of actors. At one end of the spectrum is prevention. Activities in the area of prevention of IHL violations before an armed conflict occurs remain an ongoing obligation of States, as provided for in the 1949 Geneva Conventions, and Additional Protocol I (AP I) of 1977. Prevention may take many forms, including the adoption of domestic legislation implementing IHL treaty obligations, the adequate instruction of armed forces in peacetime, the appointment of legal advisers to the armed forces, and the teaching and dissemination of IHL to the population at large. Important work in this area has been and continues to be undertaken by States, civil society groups and other organizations, including National Red Cross and Red Crescent Societies (National Societies), and the ICRC itself.

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1 International Conferences of the Red Cross and Red Crescent will hereafter be referred to simply as "International Conference" or "Conference".
2 Geneva Convention for the Amelioration of the Condition of the Wounded in Armies in the Field, 22 August 1864.

Respect for IHL may also be improved by putting into place mechanisms and procedures necessary to enable the determination of individual criminal responsibility for alleged violations, but this happens only after the relevant transgressions have occurred. Suffice it to say, in this context, that significant progress has been made over the past two decades in the area of criminal justice. At the international level this is evidenced by the creation of international or hybrid courts and tribunals, whereas domestically States have more frequently exercised universal jurisdiction over the alleged perpetrators of war crimes.

However, one issue on which inadequate progress has been achieved, and which was the focus of the joint ICRC-Swiss initiative, is the need to enhance the effectiveness of mechanisms of compliance with IHL "embedded" in this body of law. While the ICRC, in particular, as well as the government of Switzerland, had previously attempted to draw international attention to the imperative of improving compliance with IHL, their respective endeavours did not produce tangible results.

In 2003, as part of preparations for the 28th International Conference, the ICRC organized a series of regional seminars with States and other actors on "Improving Compliance with IHL".[3] The unequivocal view of participants was that compliance with IHL was inadequate, and needed to be improved. At a conference devoted to "60 Years of the Geneva Conventions and the Decades Ahead", organized in 2009 by the government of Switzerland, States identified compliance with IHL as one of the key challenges to the continued relevance of this body of law going forward.

An ICRC study carried out between 2008 and 2010, and subsequent consultations with States on "Strengthening Legal Protection for Victims of Armed Conflicts", undertaken ahead of the 31st International Conference in 2011, showed that a significant number of States believed that better implementation of IHL needed to be a priority. Their view was that existing IHL compliance mechanisms have proven inadequate and that further reflection on how to strengthen compliance with this body of international law was required. These observations formed the backdrop to Resolution 1 on "Strengthening Legal Protection for Victims of Armed Conflicts" unanimously adopted by the 31st International Conference in 2011.[4]

Resolution 1 recognized "the importance of exploring ways of enhancing and ensuring the effectiveness of mechanisms of compliance with international humanitarian law, with a view to strengthening legal protection for all victims of armed conflict".[5] In the Resolution, the 31st International Conference invited the ICRC to pursue further research, consultation and discussion in cooperation with

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3   A summary of the outcome of these consultations was annexed to the ICRC's report on *IHL and the Challenges of Contemporary Armed Conflicts*, presented to the 28th International Conference, available at: www.icrc.org/eng/assets/files/other/ihlcontemp_armedconflicts_final_ang.pdf.

4   Resolution 1, "Strengthening Legal Protection for Victims of Armed Conflicts", 31st International Conference of the Red Cross and Red Crescent, 1 December 2011, available at: www.icrc.org/eng/resources/documents/resolution/31-international-conference-resolution-1-2011.htm.

5   *Ibid.*, para. 5.

States to identify and propose possible means to enhance and ensure the effectiveness of mechanisms of compliance with IHL,[6] and requested that a report, proposing a range of options and recommendations, be submitted to the 32nd International Conference.[7] It also expressed its appreciation to the government of Switzerland for its availability to facilitate a process to explore and identify concrete ways and means to strengthen the application of IHL and to reinforce dialogue on IHL issues among States, in cooperation with the ICRC,[8] based on a pledge to this effect that Switzerland had submitted to the 31st International Conference.

Following the 31st International Conference, Switzerland and the ICRC undertook a joint initiative to facilitate implementation of the relevant provisions of Resolution 1 in order, *inter alia*, to avoid duplicating their respective efforts. The initiative was effectively launched in July 2012 when a First Meeting of States was convened in Geneva. A further eight meetings, which included Preparatory Discussions, were subsequently held, with a final, Fourth Meeting of States within the joint initiative taking place in Geneva in April 2015. In total, over 140 States participated in the consultation meetings.[9]

In accordance with the stipulations of Resolution 1, the facilitators carried out extensive research prior to each of the nine meetings held with States, and presented it in Background Documents submitted ahead of each meeting. The respective Background Documents[10] explored a range of issues and ideas, and included numerous options for State deliberation, along with guiding questions to facilitate the discussions. Each successive Background Document built on the exchanges held and positions expressed by States on a particular topic in the previous meeting(s), thus narrowing down the options in accordance with the general views expressed by delegations.

The nine meetings organized from 2012 were the primary vehicle for consultations among and with States. In addition, numerous bilateral meetings on the initiative were held with States, and regional meetings were organized, or attended, to inform and consult on the process as widely as was feasible. The International Federation of Red Cross and Red Crescent Societies and individual National Societies were likewise periodically briefed on the progress of the initiative; the International Red Cross and Red Crescent Movement's views were solicited and its support was, *inter alia*, expressed by a resolution of the Council of Delegates in 2013.[11]

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6   *Ibid.*, para. 6.
7   *Ibid.*, para. 8.
8   *Ibid.*, para. 7.
9   For a list of the participating delegations, see the Annex to the Concluding Report cited in note 12 below.
10   The relevant documents may be found on the ICRC's website at: www.icrc.org/en/document/strengthening-compliance-international-humanitarian-law-ihl-work-icrc-and-swiss-government. They are also available on the website of the Swiss Federal Department of Foreign Affairs at: www.eda.admin.ch/eda/en/home/topics/intla/humlaw/icrc.html.
11   Council of Delegates of the International Red Cross and Red Crescent Movement, Resolution 8, 17–18 November 2013, available at: www.icrc.org/eng/resources/documents/publication/p1140.htm.

Discussions and outreach on the initiative by ICRC and Swiss government representatives were undertaken in a variety of international and regional organizations, as well as with academic and civil society circles in different parts of the world.

A Concluding Report on the consultation process, as required by Resolution 1, was presented to the 32nd International Conference held in December 2015.[12] A corresponding draft resolution entitled "Strengthening Compliance with IHL" was likewise submitted – for action – to the 32nd International Conference.

The course of the ICRC-Swiss initiative

Initial work and the guiding principles

The Swiss-ICRC process began with an examination of existing mechanisms foreseen in IHL itself. By way of a reminder, there are essentially three: the Protecting Powers system, the Enquiry Procedure, and the International Humanitarian Fact-Finding Commission (IHFFC).

The Protecting Powers mechanism is provided for in the 1949 Geneva Conventions and AP I.[13] It obliges each party to the conflict to designate a neutral State, with the agreement of the other side, to safeguard its humanitarian interests, and to thereby monitor compliance with IHL. In practice, the Protecting Powers system has been used on very few occasions since World War II, the last reported instance having occurred well over three decades ago.

The formal Enquiry Procedure was first included in the 1929 Geneva Convention, and was later repeated, with additional details, in the 1949 Geneva Conventions.[14] Under the relevant provisions, an enquiry into an alleged violation of the Geneva Conventions must take place at the request of a party to the conflict. Very few attempts to use the Enquiry Procedure have been made since 1929, and none resulted in its actual launching.

The IHFFC was created in 1991 pursuant to Article 90 of AP I.[15] It is competent to enquire into any facts alleged to be a grave breach or other serious violation of the 1949 Geneva Conventions or AP I, or to facilitate, through its good offices, the restoration of an attitude of respect for these instruments. The IHFFC has not been triggered to date.

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12 International Committee of the Red Cross in conjunction with the Swiss Federal Department of Foreign Affairs, *Strengthening Compliance with International Humanitarian Law*, Concluding Report, document prepared for the 32nd International Conference of the Red Cross and Red Crescent, 32IC/15/19.2, Geneva, October 2015, available at: rcrcconference.org/wp-content/uploads/sites/3/2015/04/32IC-Concluding-report-on-Strengthening-Compliance-with-IHL_EN.pdf.

13 See Articles 8/8/8/9 of the four Geneva Conventions of 1949, respectively, and Article 5 of AP I.

14 See Articles 52/53/132/149 of the four Geneva Conventions of 1949, respectively.

15 See Article 90 of AP I.

In practice, it is mainly the ICRC which carries out a range of functions aimed at strengthening observance of IHL. However, the ICRC is not a compliance mechanism as such, but a *sui generis* international humanitarian organization.[16] Its operational and legal work is closely linked to a specific working method, which is essentially based on a bilateral and confidential dialogue with the parties to armed conflicts as a means of improving compliance with IHL. The Swiss-ICRC initiative did not aim to impinge on the role of the ICRC or to duplicate the activities performed by the organization. To the contrary, synergies – where possible – were sought in articulating the relationship between the ICRC's work, particularly in the legal domain, and an effective IHL compliance system (see further below). The ICRC's existing role and mandate were thus not a focus of the consultation process.

Two broad observations may be made about the three current IHL mechanisms proper to IHL mentioned above: (1) they have never, or rarely, been used, and (2) they were crafted only for international armed conflicts, whereas the majority of current armed conflicts are non-international in nature.

The reasons why the existing IHL compliance mechanisms have not been utilized arguably lie – among other things – in the way in which they were configured, as well as in the lack of an appropriate institutional anchoring.

They are based on the premise that States involved in an international armed conflict will have the willingness and capacity to propose to the other party, or agree with it, to trigger the mechanism in question. This approach is based on an expectation that is not likely to be fulfilled in the present day, and is perhaps due to the different times in which the respective mechanisms were designed. No current branch of international law, especially one dealing mainly with the protection of persons, relies exclusively on mechanisms that are thus configured.

Existing IHL compliance mechanisms are also standalone – that is, they lack attachment to a broader compliance structure. The absence of such a framework means that these specific mechanisms lack the institutional support which may be necessary to ensure that they are utilized, to facilitate the performance of their tasks, and to assist in any follow-up that may be appropriate.

Discussions within the Swiss-ICRC consultation process did not produce any initiatives to reconfigure the three existing mechanisms of IHL.[17] It was said instead that they remain available should the parties to an international armed conflict wish to resort to them in the future, under the terms provided for in the relevant treaties.

In this context, it was examined whether mechanisms created under other bodies of international law, human rights for example, should not (continue to) be relied on to secure better compliance with IHL. The consultation process confirmed

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16 The ICRC's mandate is provided for in the Geneva Conventions and AP I in international armed conflicts. The organization is also entitled to offer its services to the parties to non-international armed conflicts pursuant to common Article 3 to the Geneva Conventions.

17 An exception, according to some States, is the IHFFC, the triggering and mandate of which was believed to be deserving of further reflection.

that it is precisely the examination of IHL issues in non-specialized fora that demonstrates the need for a more regular dialogue among States on this separate branch of international law and its implementation. It was pointed out that IHL questions are currently not dealt with on a regular and systematic basis at the international level, but are taken up *ad hoc*, when a particular issue mobilizes sufficient interest, usually as a result of a situation of real or perceived emergency. The actors involved in IHL discussions, it was likewise stressed, often lack the requisite IHL expertise and/or mandate to engage in a qualified examination of the application of IHL norms.

Apart from an evaluation of current IHL compliance mechanisms, the consultation process initially also focused on the possible functions that a new IHL compliance system should have. The workings of a range of such functions, drawn for illustrative purposes from other international legal frameworks, were presented at the Second Meeting of States held in 2013. The list included: the establishment of a regular Meeting of States; periodic reporting; fact-finding; early warning; urgent appeals; country visits; non-binding legal opinions; good offices; State inquiries; dispute settlement; and the examination of individual complaints.[18]

It became clear fairly quickly that periodic reporting on national compliance with IHL and thematic discussions on IHL issues (a function proposed by several States at the Second Meeting of States) were to be given priority in further deliberations within the consultation process. A fact-finding function was also deemed desirable by a number of States, but proved too controversial over time and was eventually not included in the official draft resolution submitted by the ICRC to the 32nd International Conference (see below). Importantly, the consultation process also affirmed that there was general support for the establishment of a forum for regular dialogue among States on IHL – i.e., for a Meeting of States.

In sum, three elements – a regular Meeting of States, periodic reporting on national compliance with IHL, and thematic discussions on IHL issues – emerged as the backbone of a possible new IHL compliance framework. Before a brief review of their main purposes and features, a point of background should be recalled.

States were unanimous from almost the very beginning that discussions on a new IHL compliance system, as well as its eventual establishment, must be underpinned by certain guiding principles. These are reflected in Resolution 2 on "Strengthening Compliance with IHL" adopted by the 32nd International Conference.[19] Among them are: the State-driven and consensus-based character of the discussions; the imperative of avoiding politicization; the requirement that an IHL compliance system be effective, that it avoid unnecessary duplication with other compliance systems and that it take resource considerations into account;

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18   See Background Document for the Second Meeting of States on Strengthening Compliance with IHL, June 2013, available at: www.icrc.org/en/document/strengthening-compliance-ihl-second-meeting-states-strengthening-compliance-ihl-june-2013.

19   Resolution 2, "Strengthening Compliance with International Humanitarian Law", 32nd International Conference of the Red Cross and Red Crescent, 32IC/15/R2, available at: http://rcrcconference.org/wp-content/uploads/sites/3/2015/04/32IC-AR-Compliance_EN.pdf.

that all types of armed conflicts and the parties to them be addressed; that any new mechanism operate in a non-contextual manner; and that such a mechanism should ensure universality, impartiality and non-selectivity. Last but not least on the list is the principle of voluntariness, which means that the consultation process and its possible outcome should be non-legally binding. This element was the result of a clear convergence of views which emerged early on in the deliberations, according to which the search for ways to enhance the effectiveness of mechanisms of compliance with IHL should not entail amendments to the 1949 Geneva Conventions, or the negotiation of a new treaty.

The proposed IHL compliance framework

The official draft resolution submitted by the ICRC and Switzerland to the 32nd International Conference[20] contained the basic outline of a regular Meeting of States and the two functions – periodic reporting and thematic discussions on IHL issues – that should be linked to it, and touched upon a range of other issues that had been discussed in the consultation process. It was envisaged that work would continue in 2016 in order to finalize the necessary details, before the convening of a first Meeting of States by Switzerland.

The official draft as a whole, and its specific wording, aimed to reflect a balanced approach between the various positions of States expressed in the nine meetings held between 2012 and 2015, as well as between the range of comments received from members of the International Conference – both States and National Societies – on its preceding iterations. Another consideration that informed the draft was the need to find a compromise between the positions of those members of the International Conference who wanted every aspect of the future system to be agreed on before a first Meeting of States could be held, and those who preferred a text that would provide the impetus for its establishment but leave certain less crucial elements to further deliberations. Needless to say, the text listed the guiding principles mentioned above as essential for future discussions and repeated their relevance in certain key provisions.

In keeping with views expressed in the consultation process, the official draft resolution recommended the establishment of a regular Meeting of States as the centrepiece of a possible new IHL compliance system. In this context it must be recalled that, in contrast to other international legal frameworks, the Geneva Conventions and their Additional Protocols do not provide that States Parties will meet on a regular basis to discuss the application of these treaties. It was recognized in the discussions that this important gap should be filled by creating a dedicated venue in which States could gather to examine issues of common concern and perform other functions related to IHL compliance. The proposed

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20 International Committee of the Red Cross in conjunction with the Swiss Federal Department of Foreign Affairs, "Strengthening Compliance with International Humanitarian Law", official draft resolution, document prepared for the 32nd International Conference of the Red Cross and Red Crescent, 32IC/15/19.2DR, Geneva, October 2015. On file with the author.

Meeting of States was thus meant to "serve as a forum"[21] to enhance knowledge of IHL at the domestic and international levels and support universal respect for its rules, to enable exchanges on practical experiences and challenges in the implementation of IHL, to share best practices, to allow States to indicate their capacity-building needs and to foster international cooperation in addressing them, so as to strengthen the observance of this body of rules.

It had been understood early on in the consultation process that the scope of a possible Meeting of States, and therefore of its functions, should encompass the Geneva Conventions and their Additional Protocols (for States party to the latter). This, *inter alia*, meant that the system would be limited to situations in which this body of international law applies,[22] excluding circumstances that do not meet the definition of armed conflicts provided for in these foundational treaties. The guiding principles of the process confirmed that the armed conflicts referred to are both international and non-international.

With regard to possible compliance functions, the official draft resolution recognized that two were deemed in the consultation process to be particularly relevant to improving respect for IHL: thematic discussions on issues of IHL and periodic reporting on national compliance with IHL. It was stressed in the text that these functions should be organized so as to be non-contextual and non-politicized, with the specific modalities to be determined by the first Meeting of States.

The thematic discussions function had garnered widespread support. There was general agreement that a specific segment of the plenary sessions of the Meeting of States should be devoted to such discussions and that they should serve *inter alia* to ensure that States are better informed about current or emerging IHL issues and enable a better understanding of mutual legal and policy positions on these issues, provide an opportunity for exchanges of views on key legal, practical and policy questions of IHL, and develop a deeper understanding of this body of law and of practical measures taken by States to implement it. It was also said that thematic discussions should not aim at legal codification or the creation of binding rules, but should focus on a better knowledge and application of IHL. It was noted that linkages with the reporting system on national compliance with IHL (see below) should be established, and that the format of thematic discussions should ensure that they are non-politicized and interactive. Participants also discussed the criteria that should guide the selection of topics for thematic discussions, as well as their specific modalities, including the format of a possible outcome document.

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21 *Ibid.*, op. para. 7.
22 The consultations had confirmed that States not party to the Additional Protocols should be able to invoke them if they so wish. The same general view was expressed with respect to other sources of IHL, including norms of a customary nature: States that want to do so should feel free to rely on them in their engagements at the Meeting of States, i.e., in national reports on compliance with IHL or in thematic discussions on IHL issues. This is, *inter alia*, because a number of older IHL treaties, such as the 1907 Hague Conventions, are now considered to reflect customary IHL.

A periodic reporting function was examined at almost every meeting held within the ICRC-Swiss-facilitated consultation process. The discussions started with an overview of reporting as carried out in other international fora. They then delved, in some detail, into possible reporting modalities on IHL, with many successive options having been presented and reviewed in the course of the deliberations.

This text cannot replicate the specificity of those debates. Outlined below are only points of a general nature on which the views of a large majority of States who opined on this question may be said to have converged. Possible types of national reports, and follow-up, were also examined.[23] There was no discernible convergence of views on these issues, and it was widely felt that discussions should be completed by the Meeting of States, once it is established. In this context, it should be noted that some States were not in favour of a reporting function as such, or were of the opinion that the submission of a national compliance report with IHL should be a one-off, rather than a periodic occurrence.

As regards points of a general nature, it was said that a periodic reporting function is an important tool for strengthening respect for IHL, and would thus be an essential component of any future IHL compliance system. It provides an opportunity for self-assessment by States in the process of preparing a national report because it requires States to gather, collate and analyze their own law and practice. It also facilitates the establishment of a necessary baseline of information on the state of IHL implementation in various parts of the world, permitting the identification of common experiences and challenges related to IHL observance, enabling the exchange of best practices, and allowing for an expression of, and responses to, capacity-building needs that may be requested by States.

It was clear in the discussions that a reporting function should not involve an article-by-article review of the relevant IHL treaties, and that the reporting system should not be cumbersome. It was said that, subject to further debate among States on format, reports could be prepared based on guidelines or templates that are not overly prescriptive. Appropriate follow-up procedures should likewise be established; they should be non-individualized, non-contextual and non-politicized, in keeping with the aforementioned guiding principles.

As may be deduced from the above, national reporting and an IHL thematic discussions function would require expert support in order to properly operate in practice. The establishment of an expert, subsidiary body of the Meeting of States for the purpose of carrying out the necessary work (e.g., a committee composed of independent or government experts) was proposed as an option in the consultation process, but was rejected by a great majority of States. This begged the question of who might perform such a role. Most States who opined were in favour of inviting the ICRC to undertake these and other expert tasks, on its own or with the appropriate engagement of a Bureau of the Meeting of States (see below). Some States expressed doubts in this regard, but did not suggest an alternative approach.

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23 For the specifics on these two issues, see Concluding Report, above note 12, pp. 18–20.

The ICRC was ready, upon invitation, to provide expert support to the functions of the Meeting of States, provided that the relevant tasks were compatible with the organization's mandate, operational activity and standard working modalities, in particular confidentiality. Corresponding provisions were thus included in the official draft resolution submitted to the 32nd International Conference.

For the reasons already noted, the Meeting of States that emerged in the consultation process as the centrepiece of a possible IHL compliance system was intended to be voluntary – that is, not legally binding. Thus, the question of how such a system could be established was examined on several occasions within the consultation process, with the most comprehensive expression of views having taken place at the Fourth Meeting of States in 2015. Three options emerged.

Some States were of the view that the 32nd International Conference itself could establish a Meeting of States, given that a corresponding resolution adopted at the 32nd International Conference would be an adequate and sufficient expression of the sovereign will of States, as well as of the desire of the other members of the International Conference, to create such a forum. An additional key factor informing this approach was that the future IHL compliance system would not be legally binding – i.e., that the Meeting of States would be established as a regular forum on IHL issues open to all States on a voluntary basis.

Other States were of the view that the 32nd International Conference does not have the authority to establish the Meeting of States. Under this approach, the International Conference could, by way of a resolution, only invite Switzerland to convene a diplomatic conference for the purpose of establishing the future Meeting of States.

According to a third, compromise proposal, the relevant resolution should aim to capture those elements of the future IHL compliance system that are acceptable to States, while deferring the formal establishment of the system to an initial Meeting of States to be held within a predetermined timeframe. The resolution of the 32nd International Conference would thus not formally establish the Meeting of States, but would request the government of Switzerland to convene the first meeting. This last option was reflected in the official draft resolution submitted by the ICRC and Switzerland to the 32nd International Conference.

In addition to the "backbone" of a new IHL compliance system, States had discussed a range of other questions during the consultation process, some of which were likewise included in the official draft, on the understanding that certain topics would be the subject of further deliberations prior to the first Meeting of States. Some of these additional questions are briefly described below.

It was suggested in the text that the new forum be called a "Meeting of States on International Humanitarian Law". This denomination was believed to be the shortest and simplest, as it immediately indicated the particular area for which the meeting was to be established. It was likewise recommended that the Meeting of States be open on a voluntary basis to all States party to the Geneva Conventions, and that it take place annually. Yearly sessions were deemed most

appropriate to its overall purpose and would also allow efforts towards improved IHL implementation to be undertaken in a sustained manner.

The participation of observers in the Meeting of States was discussed on several occasions within the consultation process and was included in the official draft. There was a widely held view that entities other than States should be able to contribute to its work in an observer capacity. It was generally felt that a discussion on the specific modalities of observer participation was premature, meaning that it should take place at the Meeting of States, once it is established. It was stressed that the subsequent examination of this issue should be guided by the need to devise procedures for observer participation which would be consistent with the guiding principles of the process listed above, notably the avoidance of politicization and the need to ensure non-contextual dialogue and the State-driven character of the Meeting of States, as well as the need to take resource constraints into account. Three categories of possible observers at the Meeting of States were discussed in the various meetings. It was clear that National Societies and their International Federation would enjoy such status, with the precise modalities to be further discussed. Observer participation was also examined with regard to international and regional organizations and entities, and civil society actors.

It was envisaged in the consultation process that the work of the Meeting of States would be carried out in plenary sessions, which would be the core body of the future IHL compliance system. Specific segments of the sessions would be dedicated to the performance of the compliance functions outlined above, and of the relevant procedural tasks. It was understood that the precise modalities of the plenary sessions should be specified by the Meeting of States, once it is established. A provision in the official draft recommended that the Meeting of States be supported by an institutional structure, such as a chair, bureau and secretariat, the specific modalities of which were to be further discussed.

Questions related to the budgetary implications of the Meeting of States and how it will be financed had been discussed in a preliminary manner by States in late 2014 and were revisited at the Fourth Meeting of States in 2015. It was unequivocally established that the financial contributions of States to the work of the future Meeting of States would be voluntary, given its non-legally binding nature. It was furthermore reaffirmed that the need to ensure sufficient funding, predictability (i.e., that the budget can be reliably planned) and a fair distribution of costs among States were important criteria to be taken into account when devising possible funding models. The establishment of a trust fund for the purpose of financing the work of the Meeting of States was particularly highlighted, as well as the creation of a periodic pledging procedure. The draft text thus also included a paragraph on the issue of resourcing.

Last but not least, the official draft resolution recommended that the work, functions and tasks of the Meeting of States be periodically reviewed by the participating States with a view to enabling adaptations, as may be deemed useful and necessary, in keeping with the guiding principles.

The 32nd International Conference

As already mentioned, the text of the official draft resolution aimed to strike a balanced approach between the various positions of States expressed during the consultation process. An indication that the proposed framework may not garner consensus at the 32nd International Conference was given late in the process, essentially at the fourth, last Meeting of States held in April 2015, and emerged more clearly only in the written consultations on the successive iterations of the draft text ahead of its formal submission by the ICRC and Switzerland to members of the Conference in October 2015. An alternative draft resolution was received by the Joint Organizing Committee of the International Conference from nine States a few days before the actual opening of the Conference on 8 December 2015.[24]

The alternative draft did not include reference to the possible establishment of a Meeting of States. It suggested, instead, that improving respect for IHL should take place (1) within the International Conference, (2) through the engagement of States with the ICRC, and (3) in regional discussion fora on IHL between States and the ICRC. The relevant provisions did not elaborate on these respective elements.

With respect to the first element, the alternative draft emphasized that the "International Conference should play a more significant role for the purposes of non-politicised and non-contextual State-driven thematic discussions on topical IHL issues based on the primary responsibility of States for the development of international humanitarian law".[25] In this context it should be noted that most States had indeed stressed in the consultation process that synergies needed to be established between a possible Meeting of States and the International Conference. However, the prevailing view was that the relationship between the two bodies "should be guided by the distinct and autonomous character of each".[26] This, as was pointed out, is due to the fact that that the breadth of functions of the International Conference is not limited to IHL, because its composition is not confined to States, and because it meets only every four years.

As regards the second element, the alternative draft "recognize[d] the importance of the voluntary bilateral dialogue on IHL between the ICRC and particular States that provides an opportunity to discuss IHL issues in a truly confidential and non-politicized manner" and "invite[d] States to utilize this mechanism in good faith for the purposes of strengthening compliance with IHL".[27] It may be recalled in this regard that a confidential, bilateral dialogue

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24 The alternative draft resolution dated 2 December 2015, addressed to the Joint Organizing Committee of the 32nd International Conference of the Red Cross and Red Crescent, was submitted by the Permanent Mission of the Russian Federation on behalf of the Republic of Belarus, the Republic of Cuba, India, the Democratic People's Republic of Korea, the Republic of Nicaragua, the Russian Federation, the Syrian Arab Republic, the Republic of Tajikistan and the Bolivarian Republic of Venezuela. On file with the author.

25 Alternative draft resolution, above note 24, op. para. 5.

26 Official draft resolution, above note 20, op. para. 16.

27 Alternative draft resolution, above note 24, op. para. 6.

with States and non-State parties to armed conflicts aimed at improving compliance with IHL is an important aspect of the ICRC's ongoing operational and legal work, which will continue. It was stressed in the consultation process that, in addition to the preservation of an opportunity for two-way exchanges between States and the ICRC, the establishment of a regular Meeting for dialogue and cooperation on IHL issues *among* States was needed. As has been noted, IHL is a rare branch of international law which currently does not have a forum for exchanges among States that would serve to raise awareness and understanding of its norms and allow discussions of its implementation, thereby increasing States' ownership of and expertise in this field. The guiding principles of the process were devised – by States – precisely to enable them to participate in the work of the new IHL compliance system while developing mutual trust in pursuit of the common goal of improving respect for IHL.

The third element of the alternative draft "recognize[d] the importance of regional discussion forums between governments and the ICRC which provides an opportunity for the sharing of best practices and for promoting respect for and disseminating knowledge of IHL, including by organizing thematic discussions, especially on topics relevant for a given regional context".[28] This type of activity, mainly undertaken by the ICRC's Advisory Service on IHL, is likewise a staple of the organization's work in the legal field, and will continue. While the convening of regional fora is an invaluable way of facilitating exchanges on IHL among a group of States, it should also be stressed that the universal nature of IHL needs to be preserved. A regular Meeting of States was thus meant to add a global "roof" to other efforts aimed at enhancing compliance with IHL.

Discussions within the Drafting Committee of the 32nd International Conference proved difficult and did not suggest that a consensus on the official draft resolution could be achieved.[29] Three main views emerged: some members were in favour of the official draft as proposed, others supported the alternative text, and still others were essentially in favour of the idea of establishing a Meeting of States, but wanted more time to further discuss the relevant modalities. It should be stressed that all members were anxious to avoid a vote and to ensure adoption of the relevant resolution by consensus as a means of maintaining the unique and constructive space for dialogue that is the International Conference. Aside from the complexity of the issue at hand, the limited time available for negotiations on this and the other Conference resolutions was also a factor objectively constraining a possible narrowing down of positions.

The result of the deliberations is encapsulated in Resolution 2 of the 32nd International Conference. Due in no small part to the exceptional efforts and capability of the chair of the Drafting Committee, the Permanent Representative

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28   *Ibid.*, op. para. 7.
29   The International Conference takes action by means of resolutions, which are habitually adopted by consensus. However, consensus is not a statutory requirement and the Conference may decide to vote on a resolution, in which case a simple majority suffices for its adoption. See Statutes of the International Red Cross and Red Crescent Movement, Articles 10(5) and 11(7).

of Denmark to the United Nations in Geneva, Ambassador Carsten Staur, the text was adopted by consensus. The first operative paragraph reiterates the guiding principles of the consultation process. The second operative paragraph sets out the mandate for future work. The International Conference

> recommends the continuation of an inclusive, State-driven inter-governmental process based on the principle of consensus after the 32nd International Conference and in line with the guiding principles enumerated in operative paragraph 1 to find agreement on features and functions of a potential forum of States and to find ways to enhance the implementation of IHL using the potential of the International Conference and IHL regional forums in order to submit the outcome of this intergovernmental process to the 33rd International Conference.

Resolution 2 may be said to represent a compromise between the official draft resolution and the alternative text – i.e., between all the proposals that emerged and which may, in effect, be considered complementary. It was the best that could be obtained under the circumstances and represents an outcome which, importantly, keeps the process going. Future work is described in the key paragraph of the resolution as a "State-driven inter-governmental process". The text thus signals a shift from the consultative character of the previous four years of meetings to deliberations among States in order "to find agreement" and to "submit the outcome" of the intergovernmental process to the 33rd International Conference. This will presumably require and generate more State ownership of the work to come, including the development of specific proposals by some States that will have to be tested against the views of other States in order to move forward and eventually achieve consensus.

Given that Resolution 2 recommends the continuation of an intergovernmental process, it was agreed that Switzerland and the ICRC should carry on in their role as co-facilitators. Due to lack of time, no specific provisions on this issue or on the organization of work more broadly were included in the final text. The facilitators' role was instead expressed in the Drafting Committee, with the conclusion that it would be memorialized in the written record of the Conference.

Going forward

The intergovernmental process mandated by Resolution 2 is underway as of this writing. A first preliminary discussion among States, represented by their Permanent Missions in Geneva, was held in June 2016. The purpose of the meeting, convened by Switzerland and the ICRC, was to allow an initial exchange of ideas among States on how the process should be taken forward and to provide guidance to the facilitators in this regard. A second gathering in the same format took place in October 2016, while the first formal Meeting of States is scheduled for November 2016. Based on the views expressed so far, the principal

aim of the November meeting will be for States to examine and agree on procedural issues related to fulfilling the mandate provided by the International Conference. It is anticipated that a draft programme of work will also be discussed, along with a timetable of activity leading up to the 33rd International Conference.

Concluding remark

As stressed by members of the 32nd International Conference in 2015, there is an "imperative need" to improve compliance with IHL. The ICRC and Switzerland, each within their respective roles, continue to work daily to ensure that the rules of this body of law are better respected. As facilitators, they will do their best to help the intergovernmental process reach an agreement that will contribute to this goal as well.

REPORTS AND DOCUMENTS

ICRC's statement at Habitat III

Plenary statement by the ICRC at Habitat III, given by Hugo Slim, head of Policy at the International Committee of the Red Cross, 17–20 October 2016, Quito, Ecuador

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Your Excellencies, Ladies and Gentlemen,

The ICRC welcomes the New Urban Agenda.

Quite rightly, the Declaration, Vision, Commitments and Implementation Plan of the New Urban Agenda focus on the cities we want. Inevitably, however, the New Urban Agenda (NUA) must start with the cities we have.

While we are in Quito, many thousands of people in the Syrian city of Aleppo are struggling to survive in the middle of armed conflict – their homes destroyed, their loved ones dead, their water, health and electricity services struggling to cope, and much of their city in ruins.

In Mosul in Iraq, thousands more are bracing themselves for a long battle that will bring death and destruction to their neighbourhoods. Like people in Fallujah before them, hundreds and thousands of them may flee from their city with nothing, and join the ranks of the world's 65 million forcibly displaced people, 75% of whom lives in urban areas.

The immediate challenge of the New Urban Agenda is to make today's cities resilient to armed conflict, disasters and violence. A truly resilient city is one that continues to work in bad times as well as good. Bad times are the acid test of resilience in cities. Keeping cities working for their people in the terrible conditions of conflict, disaster and violence is the challenge spelt out in the important humanitarian commitments of the New Urban Agenda.

But no city should have to endure violations of international humanitarian law (IHL) as stated in paragraph 30 of the NUA. The ICRC calls on all parties to conflict to respect IHL in today's increasing urban warfare. We also urge them to avoid using explosive weapons with wide area impact in densely populated areas. And we call on all warring parties to protect health facilities, their staff and patients.

The humanitarian commitments in the New Urban Agenda are significant, and the International Red Cross and Red Crescent Movement has worked hard to secure them with the help of many States present here today, UN Habitat and the various stakeholders of the General Assembly of Partners. We are glad to see humanitarian commitments run through the various paragraphs of the NUA.

It is not only in the tragic conflicts of the Middle East that cities are being destroyed and people are being forced to flee their homes to congregate as urban IDPs, or move as migrants to a different country.

Millions of people in cities, towns and informal settlements across the world find themselves in similar conditions. Armed conflicts and urban violence force thousands of people to move from one part of their city to another in search of safety, often being hosted by the urban poor whose living conditions are already extremely vulnerable.

War changes cities and makes new cities. One small town in northern Nigeria recently saw its population increased twenty fold in three days as people fled to it for safety. The towns and cities of the Lake Chad Basin have now joined those in South Sudan, the Central African Republic and the Democratic Republic of Congo as cities hosting IDPs, most of them urban IDPs deprived of effective basic services. In Asia, Afghanistan and Myanmar, towns and cities face similar challenges.

The two main pressure points in cities affected by armed conflict, and in cities struggling with urban violence, are safety and services. Safety and services are the great twin challenge for Mayors and municipal authorities and their operational partners.

This is why the ICRC is pleased to see so much emphasis on safety and services in the New Urban Agenda. It is in these two areas that the humanitarian struggle to support urban populations affected by armed violence must be won.

Armed conflict and urban violence will continue in the twenty years of the New Urban Agenda. These commitments to safety and services will be essential policy guides as city authorities work closely with humanitarian organizations to ensure that their cities respect the proper legal limits to armed violence, protect those most at risk and repair the humanitarian consequences of armed conflict.

If the acid test for a resilient city is its performance in bad times, then the test for effective safety and services is human dignity. Even in the worst of times, a city should seek to affirm and preserve the dignity of every human being who lives there, or who arrives to seek refuge within it.

The ICRC has been pleased to be a part of Habitat III and we gladly endorse the Statement to follow that will be made by the President of the Ecuadorian Red Cross on behalf of the whole Red Cross and Red Crescent Movement.

The New Urban Agenda starts today and needs to engage in the reality of today's cities. As people in Aleppo would surely remind us: the smartest city is a safe city.

REPORTS AND DOCUMENTS

ICRC's Statement to the Third Preparatory Committee of Habitat III

Delivered by Dr Hugo Slim, Head of Policy at the International Committee of the Red Cross, at the Third Preparatory Committee of Habitat III, 25 July 2016, Surabaya

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Your Excellencies, Ladies and Gentlemen,

In an urbanizing world, armed conflict and violence are urbanizing too.

Cities like Aleppo and Falujjah are being destroyed. Their civilian populations are facing displacement, siege and impoverishment. In South Sudan, people in Juba, Wau, Bentiu and Leer are living in similarly desperate conditions.

Armed conflict and violence are major causes of development reversals in many towns, cities and informal settlements. Prospects for sustainable development in these urban areas are being pushed back by decades.

Millions of urban people living in protracted conflict and chronic urban violence are being left behind.

The ICRC is concerned that the impact of conflict and chronic urban violence is not yet receiving the attention it deserves in the New Urban Agenda.

We have made recommendations to States for Habitat III, and are asking you to do three things as you negotiate in Surabaya.

First – please recommit to respect and ensure respect for international humanitarian law.

Conflicts are increasingly being fought in urban areas. We are tragically familiar with the severe humanitarian consequences of urban conflict in cities like Gaza, Homs, Mogadishu and Sana'a.

Habitat III's concern for safety must apply to civilian populations in urban conflicts too.

Parties to conflict must distinguish between military and civilian objects in urban areas. Precautions must be taken in attack and defense, and the use of military force must be proportionate to the threat.

Explosive weapons that have wide area impact should be avoided in densely populated areas. Blast and fragments from these weapons can damage pipes and substations - depriving people of water and electricity for months.

Healthcare facilities, their patients and their staff need to be protected and not indiscriminately or deliberately attacked.

Urban designers have a responsibility to site military installations away from civilian objects, and avoid placing factories using dangerous substances close to schools and housing.

Secondly, States must commit to support resilient urban services in protracted conflicts.

Millions of people in towns, cities and informal settlements rely on interconnected infrastructure to meet their needs for essential electricity, water, sewerage and waste management. Without such systems, people's living conditions deteriorate fast.

Over time, with repeated attacks and problems of staffing and supply, urban systems succumb to a cumulative impact that renders them increasingly inadequate, reducing people's life chances even further.

States and municipal authorities need to invest in the resilience of urban infrastructure and services during conflict. This means working closely with humanitarian partners and committing to multi-year financing.

Thirdly, local governments need support to serve people affected by chronic urban violence.

Much urban violence is not armed conflict but chronic violence that can result in similar humanitarian consequences.

Urban violence stops health workers and patients going to health facilities. It stops children and teachers going to school.

The New Urban Agenda should support local authorities and communities to increase people's safer access to essential services by monitoring the invisible costs of violence and changing behavior.

Thank you for letting the ICRC speak to you today.

Please give the millions of people suffering from conflict and violence their rightful place in the New Urban Agenda.

REPORTS AND DOCUMENTS

What's new in law and case law around the world?

Biannual update on national implementation of international humanitarian law*
July–December 2015

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The biannual update on national legislation and case law is an important tool in promoting the exchange of information on national measures for the implementation of international humanitarian law (IHL).

In addition to a compilation of domestic laws and case law, the biannual update includes other relevant information related to accession and ratification of IHL and other related instruments, and to developments regarding national committees on IHL or similar bodies. It furthermore provides information on some efforts by the ICRC Advisory Service

ICRC Advisory Service

The ICRC's Advisory Service on International Humanitarian Law aims to provide a systematic and proactive response to efforts to enhance the national implementation of international humanitarian law (IHL). Working worldwide through a network of legal advisers to supplement and support governments' own resources, its four priorities are: (i) to encourage and support adherence to IHL-related treaties; (ii) to assist States by providing them with specialized legal advice and the technical expertise required to incorporate IHL into their domestic legal frameworks;[1] (iii) to collect and facilitate the exchange of information on national implementation measures and case law;[2] and (iv) to support the work of national committees on IHL and other bodies established to facilitate the IHL implementation process.

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* This selection of national legislation and case law has been prepared by Cédric Apercé, legal attaché in the ICRC Advisory Service on International Humanitarian Law, with the collaboration of regional legal advisers.

during the period covered to promote universalization of IHL and other related instruments and their national implementation.

Update on the accession and ratification of IHL and other related international instruments

Universal participation in IHL and other related treaties is a first vital step toward the respect of life and human dignity in situations of armed conflict. In the period under review, ten IHL and other related international conventions and protocols were ratified or acceded to by twenty-nine States.[3] These include, next to the IHL core conventions and protocols, treaties related to weapons and instruments such as the Optional Protocol to the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment and the International Convention for the Protection of All Persons from Enforced Disappearance, which are also of relevance for the protection of persons and civilian objects during armed conflicts. In particular, there has been notable adherence to the 2013 Arms Trade Treaty (ATT). Indeed, ten States have ratified the ATT in the second half of 2015, bringing the number of States Parties as of 31 December 2015 to seventy-nine.

The following table outlines the total number of ratifications of and accessions to IHL treaties and other relevant related international instruments, as of the end of December 2015.

Ratifications and accessions, July–December 2015

Convention	States	Ratification/ accession date	Number of parties
1954 Convention for the Protection of Cultural Property in the Event of Armed Conflict	Ethiopia	31 August 2015	127
1954 First Protocol to the Hague Convention of	Ethiopia	31 August 2015	104

1   In order to assist States, the ICRC Advisory Service proposes a multiplicity of tools, including thematic fact sheets, ratification kits, model laws and checklists, as well as reports from expert meetings, all available on the unit's web page at: www.icrc.org/en/war-and-law/ihl-domestic-law (all internet references were accessed in July 2016).
2   For information on national implementation measures and case law, please visit the ICRC Database on National Implementation of IHL, available at: www.icrc.org/ihl-nat.
3   To view the full list of IHL-related treaties, please visit the ICRC Treaty Database, available at: www.icrc.org/ihl.

What's new in law and case law around the world? July–December 2015

INTERNATIONAL REVIEW of the Red Cross

(*Cont.*)

Convention	States	Ratification/ accession date	Number of parties
1954 for the Protection of Cultural Property in the Event of Armed Conflict			
1989 Convention on the Rights of the Child	Somalia	1 October 2015	196
1993 Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction	Myanmar Angola	8 July 2015 16 September 2015	192
2000 Optional Protocol to the Convention on the Rights of the Child on the Involvement of Children in Armed Conflict	Kiribati Bahamas Federated States of Micronesia	16 September 2015 28 September 2015 26 October 2015	162
2002 Optional Protocol to the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment	Belize	4 September 2015	80
2006 International Convention for the Protection of All Persons from Enforced Disappearance	Greece Niger Belize Ukraine Italy	9 July 2015 24 July 2015 14 August 2015 14 August 2015 8 October 2015	51
2008 Convention on Cluster Munitions	Slovakia Rwanda Iceland	24 July 2015 25 August 2015 31 August 2015	98

Continued

(*Cont.*)

Convention	States	Ratification/ accession date	Number of parties
	Colombia	10 September 2015	
	Somalia	30 September 2015	
	Mauritius	1 October 2015	
2010 Amendment to Article 8 of the Rome Statute of the International Criminal Court	Switzerland	10 September 2015	26
	Lithuania	7 December 2015	
	Finland	30 December 2015	
2013 Arms Trade Treaty	Mauritius	23 July 2015	79
	Niger	24 July 2015	
	San Marino	29 July 2015	
	Central African Republic	7 October 2015	
	Togo	8 October 2015	
	Tuvalu	4 September 2015	
	Mauritania	23 September 2015	
	Republic of Moldova	28 September 2015	
	Seychelles	2 November 2015	
	Ghana	22 December 2015	

National implementation of international humanitarian law

The laws and case law presented below were either adopted by States or delivered by domestic courts in the second half of 2015. They cover a variety of topics linked to IHL, such as detention in relation to armed conflict, criminal procedures and international criminal justice, weapons, protected persons and the protection of the emblem of the red cross.

This compilation is not meant to be exhaustive; it represents a selection of the most relevant developments relating to IHL implementation and related issues collected by the ICRC. The full texts of these laws and case law can be found in the ICRC's Database on National Implementation of IHL.[4]

4   See the ICRC Database on National Implementation of IHL, available at: www.icrc.org/ihl-nat.

What's new in law and case law around the world? July–December 2015

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A. Legislation

The following section presents, in alphabetical order by country, the domestic legislation adopted during the period under review (July–December 2015). Countries covered are Algeria, the Democratic Republic of the Congo, Ecuador, Kosovo, Luxembourg, Peru, the Philippines, Spain, Switzerland, Turkmenistan and Venezuela.

Algeria

Law No. 15-12 on Child Protection[5]

On 15 July 2015, the president of Algeria promulgated Law No. 15–12 on Child Protection.

The law refers to the 2000 Optional Protocol to the Convention on the Rights of the Child on the Involvement of Children in Armed Conflict. It calls for a global protection of children's rights, but also provides for the protection of children in the family, at school, or in the street.

The law states that if a child is a refugee or a victim of sexual exploitation, armed conflicts or other cases of trouble and insecurity, that child is considered as exposed to danger under the present law and falls under the definition of the term "child in danger".

Moreover, it establishes the responsibility of the State in protecting the rights of the child in situations of emergency, disaster and armed conflict.

Democratic Republic of the Congo

Law 15/022 modifying the Penal Code; Law 15/023 modifying the Military Penal Code; Law 15/024 modifying the Penal Procedure Code[6]

On 31 December 2015, the president of the Democratic Republic of the Congo (DRC) promulgated three laws implementing the International Criminal Court (ICC) Statute ratified by the DRC on 30 March 2002.

Firstly, Article 4 of the law modifying the Penal Code introduces and defines in Title IX of the Penal Code of the DRC the crime of genocide (Article 221), crimes against humanity (Article 222) and war crimes (Article 223). In addition, Article 2 of the law provides that no statute of limitation or immunities apply to crimes under this Title.

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5   Available at: www.icrc.org/applic/ihl/ihl-nat.nsf/implementingLaws.xsp?documentId=3B2165988EBBF CFEC1257EBB0045DB53&action=openDocument&xp_countrySelected=DZ&xp_topicSelected=GVAL-992BUD&from=state.
6   Available at: https://ihl-databases.icrc.org/applic/ihl/ihl-nat.nsf/implementingLaws.xsp?documentId= 49C04B6F6300E1E2C1258043002924E5&action=openDocument&xp_countrySelected=CD&xp_topic Selected=GVAL-992BU6&from=state.

Further, Article 1 of the law modifying the Military Penal Code provides that Title IX of the Penal Code is applicable to military courts as well. It also underlines the relevance of the responsibility of commanders and other superiors in the commission of the mentioned crimes.

Finally, the law modifying the Penal Procedure Code provides for the cooperation of the DRC with the ICC, as well as the rights of victims, witnesses and defendants.

Ecuador

Law on the Amendments to Article 158 of the Constitution of Ecuador[7]

On 21 December 2015, the president of Ecuador promulgated the Law on the Amendments of the Constitution.

Namely, Article 5 of the law modifies Article 158 of the Constitution by allowing the Armed Forces to support the Ecuadorian National Police in the maintenance of public order. This support is defined as complementary to the Armed Forces' primary function of defence of the sovereignty and territorial integrity of the country. Additionally, such support must be in conformity with the law. This constitutional amendment follows the 2014 legislative amendment of the law on State and public security which refers to the support that the Armed Forces can provide to the Ecuadorian National Police.[8]

Kosovo[9]

Amendment No. 24 to the Constitution of the Republic of Kosovo, No. 05-V-139[10]

On 3 August 2015, the Assembly of Kosovo adopted Amendment No. 24 to the Constitution of the Republic of Kosovo. In line with Council of Europe Parliamentary Assembly Report Doc. 12462 of 2011,[11] this amendment allows the establishment of Specialist Chambers (SC) and a Specialist Prosecutor's Office (SPO) within the justice system of Kosovo for a period of five years. The SC are competent for crimes against humanity, war crimes and other crimes under Kosovo law which occurred between 1 January 1999 and 31 December 2000.

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7   Available at: www.icrc.org/applic/ihl/ihl-nat.nsf/implementingLaws.xsp?documentId=1ADAB0F0AA 7407EEC1257FA30046960B&action=openDocument&xp_countrySelected=EC&xp_topicSelected=GVAL-992BUA&from=state.

8   Available at: www.icrc.org/applic/ihl/ihl-nat.nsf/implementingLaws.xsp?documentId=A9F3B7618608 D0EEC1257EDE00557E9D&action=openDocument&xp_countrySelected=EC&xp_topicSelected=GVAL-992BUA&from=state.

9   UNSC Res. 1244, 10 June 1999. The boundaries, names and designations used in this report do not imply official endorsement, nor express a political opinion on the part of the ICRC, and are without prejudice to claims of sovereignty over the territories mentioned.

10   Available at: www.icrc.org/applic/ihl/ihl-nat.nsf/implementingLaws.xsp?documentId=18AC13915C0 591A0C1257F8C0029AEA7&action=openDocument&xp_countrySelected=XZ&xp_topicSelected=GVAL-992BU6&from=state.

11   Available at: www.assembly.coe.int/nw/xml/XRef/Xref-XML2HTML-en.asp?fileid=12608&lang=en.

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According to paragraph 4, the SC and SPO shall have full legal and juridical personality. They shall have all the necessary powers and mandate for their operation, judicial cooperation, assistance, witness protection, security, detention and the service of sentence outside the territory of Kosovo for anyone convicted, as well as in relation to the management of any residual matters after finalization of the mandate.

The amendment also provides that the organization, functioning, jurisdiction, specific administrative procedures, budgeting, oversight and other issues shall be regulated by a specific law, along with specific arrangements.

Finally, the SC and SPO shall uphold the protections enshrined under the Kosovo Constitution, and in particular shall act in compliance with international human rights standards.

Law No. 05/L-053 on Specialist Chambers and Specialist Prosecutor's Office[12]

On 20 August 2015, the president of Kosovo promulgated Law No. 05/L-053 on Specialist Chambers and Specialist Prosecutor's Office. The law establishes and regulates the organization, functions and jurisdiction of the SC and the SPO.

According to Article 1(2), the SC and SPO aim to ensure secure, independent, impartial, fair and efficient criminal proceedings in relation to allegations of grave trans-boundary and international crimes (including war crimes) committed during and in the aftermath of the conflict in Kosovo which relate to those reported in Council of Europe Parliamentary Assembly Report Doc. 12462 of 7 January 2011[13] and which have been the subject of criminal investigation by the Special Investigative Task Force of the Special Prosecution Office of the Republic of Kosovo.

In terms of applicable law and according to Article 12, the SC shall apply customary international law and the substantive criminal law of Kosovo as provided by Article 15. The jurisdiction *ratione temporis* is limited to crimes which occurred between 1 January 1999 and 31 December 2000 (Article 7), whereas the jurisdiction *ratione loci* is consistent with the jurisdiction of Kosovo courts under criminal laws in force between 1 January 1999 and 31 December 2000 (Article 8). On jurisdiction *ratione materiae*, Article 6 provides jurisdiction over crimes which relate to the Council of Europe Report, as well as over offences which relate to its official proceedings and officials. As for the first category, the law further details crimes against humanity (Article 13), war crimes (Article 14) and other crimes under Kosovo law (Article 15). In line with Article 9, the SC are based on active and passive personality jurisdiction over natural persons of Kosovo/Federal Republic of Yugoslavia citizenship. Moreover, the SC have

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12 Available at: www.icrc.org/applic/ihl/ihl-nat.nsf/implementingLaws.xsp?documentId=B4E8F40ABCB BF7E3C1257F8C003FB738&action=openDocument&xp_countrySelected=XZ&xp_topicSelected=GVAL-992BU6&from=state.
13 See above note 11.

primacy over all courts in Kosovo (Article 10) and amnesties shall not bar prosecution or punishment (Article 18).

In terms of fundamental guarantees, the legislation also recalls the obligations under Chapter II of the Kosovo Constitution, and the legal framework set out by this for limitations to fundamental rights and freedoms.

In addition, Chapter V of the law defines the organization, structure and competencies of the SC, the Registry and the SPO. Further, the conduct of proceedings before the Court is specified under Chapter VI. Cooperation and assistance with other States, organizations and entities is described under Chapter VIII.

Luxembourg

Regulation on the Brokering of Military Goods and Dual Use Goods[14]

On 5 August 2015, the grand duke of Luxembourg promulgated the Regulation on the Brokering of Military Goods and Dual Use Goods, amending the Regulation concerning the Import, Export and Transit of Weapons, Ammunitions and Material for Military Use of 31 October 1995.

This new regulation extends control mechanisms to all products governed by European Union Directive 2012/10/EU on defence products including directed energy weapons and chemical warfare agents.[15] Article 1, thereby amended, defines products covered by the regulation and sets out a license regime. Similarly, Article 8 regulates brokering activities of such products while Article 10 extends the scope of the regulation to environment modification techniques.

In addition, Article 2 of the regulation modifies the 2011 regulation on dual-use goods by submitting such goods to a license regime as well as regulating related brokering activities.

Peru

Law No. 30339 related to the Control, Surveillance and Defence of the Airspace[16]

On 28 August 2015, the president of Peru promulgated Law No. 30339 on Control, Surveillance and Defence of the Airspace. The law regulates the use of force against a hostile aircraft, as well as the criteria for determining the hostile character of such an aircraft.

Article 3 defines the notion of national airspace, while Article 4 provides for the establishment of an identified defence area zone.

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14 Available at: www.icrc.org/applic/ihl/ihl-nat.nsf/implementingLaws.xsp?documentId=47CCC9998A0C7CD5C125765800460B43&action=openDocument&xp_countrySelected=LU&xp_topicSelected=GVAL-992BUP&from=state.

15 Available at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:085:0003:0034:en:PDF.

16 Available at: www.icrc.org/applic/ihl/ihl-nat.nsf/implementingLaws.xsp?documentId=D49DA40F8732A017C1257FA3004B5DF7&action=openDocument&xp_countrySelected=PE&xp_topicSelected=GVAL-992BUA&from=state.

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Further, Article 5 provides that an aircraft is to be considered as hostile if it violates the national airspace for illicit purposes; represents a threat to strategic facilities for the functioning of the country, essential public services, the population, resources, the armed forces or the national police; makes any moves that go against the intercepting aircraft; or disobeys the instructions of the crew of this aircraft. According to Article 10, the use of force may be applied as a last-resort measure against a hostile aircraft if the aircraft is being used to cause serious injury to the life or integrity of persons, or serious damage to property or damage to the environment; to traffic drugs; to transport weapons, ammunition, explosives (or material for processing) or antipersonnel mines; or to endanger the lives of the crew of the intercepting aircraft.

Philippines

Republic Act No. 10697 Preventing the Proliferation of Weapons of Mass Destruction by Managing the Trade in Strategic Goods, the Provisions of Related Services, and for Other Purposes[17]

On 13 November 2015, the president of the Philippines approved Republic Act No. 10697, also known as the Strategic Trade Management Act. The act declares the policy of the Philippine State to be free from weapons of mass destruction (WMD) in its territory consistent with its national security interests and foreign policy, and in support of efforts to counter terrorism, control crime and protect public safety. Towards this end, the State shall manage the trade of strategic goods and provision of related services in accordance with international standards and best practices. Under Section 5, the legislation defines WMD as any destructive device or weapon that is designed or intended to cause death or serious bodily injury through the release, dissemination or impact of toxic or poisonous chemicals, or their precursors; any weapon involving a biological agent, toxin or vector; or any weapon that is designed to release radiation or radioactivity at a level dangerous to human life.

Section 3 of the legislation lays down its scope of application – export, import, transit and transshipment of strategic goods. It also provides for the establishment of a National Strategic Goods List to describe with specificity the strategic goods subject to authorization (Section 4). A Strategic Trade Management Committee under the National Security Council is also established under the act as the central authority focusing on the country's international commitment towards the promotion of a secured and safe environment in relation to the trade in strategic goods.

Finally, the act provides for international legal cooperation under which the Department of Justice shall make and receive requests for assistance from foreign States and execute or arrange for the execution of such requests (Section 29).

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17 Available at: www.icrc.org/applic/ihl/ihl-nat.nsf/implementingLaws.xsp?documentId=619833E50E6C 51FFC1257F8F0032A712&action=openDocument&xp_countrySelected=PH&xp_topicSelected=GVAL-992BU6&from=state.

Spain

Law 27/2015 amending Law 33/1998 Prohibiting Antipersonnel Landmines and Similar Weapons[18]

On 28 July 2015, Law 27/2015 amending Law 33/1998 Prohibiting Antipersonnel Landmines and Similar Weapons was promulgated. It aims at implementing the Convention on Cluster Munitions by totally prohibiting cluster munitions, including the financing and advertising of these weapons.

In particular, Article 2 sets out the prohibition on the use, stockpiling, production and transfer of such weapons. However, Article 2(3) states that it is not prohibited for Spain to take part in military operations with other States which have not ratified the Convention. Article 3 provides that Spain undertakes to destroy or ensure the destruction of all antipersonnel mines and cluster munitions. Under Article 5, exceptions are formulated on the retention or transfer of a number of such weapons for the development of technical detection, clearance or destruction of these weapons.

Finally, Article 6 states that Spain will support international cooperation towards the implementation of the Convention.

Switzerland

Federal Law on the Implementation of the International Convention for the Protection of All Persons from Enforced Disappearance[19]

On 18 December 2015, the Swiss Federal Assembly adopted the Federal Law on the Implementation of the International Convention for the Protection of All Persons from Enforced Disappearance. The law approves the ratification of the Convention by the Federal Council and contains provisions aiming at its faithful implementation under Swiss law.

In particular, Article 2 provides that a person is considered as disappeared when deprived of liberty under the mandate or consent of the State, followed by a refusal to acknowledge the deprivation of liberty or by concealment of the fate or whereabouts of the disappeared person, which places such a person outside the protection of the law.

Moreover, Article 3 creates an obligation to maintain a register of individuals deprived of liberty, while Article 4 establishes a network between the federal authorities and the local governments (cantons) in order to facilitate exchange of information when a person disappears.

18 Available at: www.icrc.org/applic/ihl/ihl-nat.nsf/implementingLaws.xsp?documentId=1C4EB7A62937 ABDAC1257ECB0055FAD2&action=openDocument&xp_countrySelected=ES&xp_topicSelected=GVAL-992BUM&from=state.
19 Available at: www.icrc.org/applic/ihl/ihl-nat.nsf/implementingLaws.xsp?documentId=83CDFE881B43 3779C1257FA70044E7CE&action=openDocument&xp_countrySelected=CH&xp_topicSelected=GVAL-992BUF&from=state.

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Finally, the legislation amends the Penal Code of Switzerland by criminalizing enforced disappearance under its Title 4: Felonies and Misdemeanours against Liberty and Title 12: Felonies and Misdemeanours against Public Order. Through these amendments the law criminalizes enforced disappearance (Article 185 *bis*) and acts preparatory to its commission (Article 260 *bis*).

Ordinance on War Material[20]

On 19 August 2015, the Swiss Federal Council modified the Ordinance on War Material in order to regulate the transit of civilian aircraft with war material on board.

According to the newly introduced Article 5(c), transit of civilian aircraft with war material on board is authorized in Swiss airspace if in line with international law, Swiss foreign policy principles and international obligations. In contrast to land transit authorizations, criteria laid down by Article 5 of the ordinance are not compulsory for air transit but remain a guidance for granting the authorization.

In addition, Article 13(3) provides that the authorization must be addressed to the Federal Office for Civilian Aviation. However, the State Secretariat for Economic Affairs is responsible for granting such authorization in consultation with competent services of the Federal Department of Foreign Affairs (Article 14(2)).

These provisions entered into force on 1 October 2015.

Turkmenistan

Law on Amendments and Modifications to the Criminal Code of Turkmenistan[21]

On 3 December 2015, the president of Turkmenistan promulgated the Law on Amendments and Modifications to the Criminal Code of Turkmenistan. It introduces eleven new articles under Chapter 21 – "Crimes against the Peace and Security of Mankind" – of the Criminal Code.

In particular, Article 167(4) criminalizes the use of prohibited means and methods of warfare, while Article 167(5) provides for violations of the laws and customs of war. Most serious crimes considered under those articles, such as wilful killing of persons protected under the Geneva Conventions or use of weapons of mass destruction, can be punishable by deprivation of liberty for a term of up to twenty-five years. Similarly, Article 167 considers the illegal use of emblems and signs under the protection of international treaties.

The law also criminalizes aggressive war and its propaganda, mass destruction of flora and fauna (ecocide) and the manufacture, acquisition or sale

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20 Available at: www.icrc.org/applic/ihl/ihl-nat.nsf/implementingLaws.xsp?documentId=DACF6A2B3A 6EC963C1257EB900333419&action=openDocument&xp_countrySelected=CH&xp_topicSelected=GVAL-992BUP&from=state.
21 Available at: https://ihl-databases.icrc.org/applic/ihl/ihl-nat.nsf/implementingLaws.xsp?documentId= 81707402D8D416BFC1258003002C6E4F&action=openDocument&xp_countrySelected=TM&xp_topic Selected=GVAL-992BU6&from=state.

of weapons of mass destruction. Finally, Article 169(2) outlines that the action of a national of Turkmenistan taking part in armed conflicts or hostilities in foreign States shall be punishable by deprivation of liberty for a term of three to eight years.

Venezuela

Law on the Protection of the Name and Emblem of the Red Cross[22]

On 28 December 2015, the president of Venezuela promulgated the Law on the Protection of the Name and Emblem of the Red Cross. This new law repeals the previous law on the issue that was adopted in 1965.

Article 1 defines the scope of the law as the protection of the name and use of the red cross, red crescent and any other emblem as recognized by international instruments.

The law establishes a clear distinction between the indicative and the protective use of the emblem, as well as a precise distinction between the different types of misuse or abuse of the latter, namely imitation, improper use and perfidy (Articles 3, 4 and 9). Moreover, Article 10 states that a perfidious use of the emblem is punishable in conformity with the national laws and the relevant international legal instruments to which Venezuela is a party.

Articles 12 and 13 set out the sanctions, fees and aggravating circumstances linked to the different types of misuse of the emblem. Furthermore, revenues thereby created may be donated to the Venezuelan Red Cross for its humanitarian activities.

The Ministry of Defence, and in particular its Directorate for Human Rights and International Humanitarian Law, is entrusted with monitoring the application of the law.

B. National IHL committees and similar bodies

National authorities face a formidable task when it comes to implementing IHL within the domestic legal order. This situation has prompted an increasing number of States to recognize the usefulness of creating a group of experts or similar body – often called a national IHL committee or a national commission for IHL – to coordinate activities in the area of IHL. Such committees *inter alia* promote ratification of or accession to IHL treaties, make proposals for the harmonization of domestic legislation with the provisions of these treaties, promote dissemination of IHL knowledge and participate in the formulation of the State's position regarding matters related to IHL. In December 2015, Jordan adopted a definite law permanently establishing the national IHL committee

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22 Available at: www.icrc.org/applic/ihl/ihl-nat.nsf/implementingLaws.xsp?documentId=615FD99A8AE 43A18C1257F3A0049E2C0&action=openDocument&xp_countrySelected=VE&xp_topic Selected=GVAL-992BU8&from=state.

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existing in the country since 1998, while the Bolivarian Republic of Venezuela established a national IHL committee. Additionally, the Syrian Arab Republic reactivated its committee in July 2015, bringing the total number of national IHL committees across the world to 108 by December 2015.[23]

Jordan

National Commission for the Implementation of IHL

On 28 December 2015, the king of Jordan promulgated Law No. 5 of 2016 establishing the National Commission for the Implementation of IHL[24] in replacement of the temporary Law No. 63 of 2002.

The Commission has existed in Jordan since 1998, with its main branch located in the capital Amman. It possesses legal personality and administrative independence. The Commission determines the general policy and national strategy on IHL, approving plans and programmes for raising awareness of the principles of IHL at the national level. Moreover, the Commission is tasked with exchanging information and expertise with national, Arab, regional and international organizations and commissions concerned with IHL, and strengthening ties with them.

The law states that the Commission is composed of representatives of the prime minister, the Ministries of Defence, Justice, Foreign Affairs, Interior, Education and Health, the House of Representatives and the Senate, and the president of the Jordanian Red Crescent Society, as well as four experts appointed by the chairman. According to Article 4, a representative of the ICRC is also allowed to attend the meetings of the Commission as observer.

Syria

National Committee on IHL

On 21 July 2015, the Syrian National Committee on IHL was reactivated as a result of Prime Ministerial Decree No. 2072. The committee had been formally established under Prime Ministerial Decree No. 2989 of 2 June 2004.[25]

The main function of the National Committee is to coordinate national action to disseminate IHL and encourage the adoption of domestic legislation. In addition, it provides support for the Syrian Arab Red Crescent and the General

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23 To view the full list of national committees and other national bodies on IHL, please visit the ICRC's related webpage, available at: www.icrc.org/en/document/table-national-committees-and-other-national-bodies-international-humanitarian-law#.VBquQFOa4wo.

24 Available at: www.icrc.org/applic/ihl/ihl-nat.nsf/implementingLaws.xsp?documentId=7BA8E2E55F C0EEA4C125702F0044DCD2&action=openDocument&xp_countrySelected=JO&xp_topicSelected=JPAA-9DWC8W&from=state.

25 Available at: https://ihl-databases.icrc.org/applic/ihl/ihl-nat.nsf/implementingLaws.xsp?documentId= 7298A545C4F95EC7C12570570041B733&action=openDocument&xp_countrySelected=SY&xp_topic Selected=JPAA-9DWC8W&from=state.

Directorate for Civil Defence and International Cooperation. The Committee is also responsible for the examination of violations of IHL.

The Committee is composed of representatives of the Ministries of Foreign Affairs, Defence, Justice, the Interior and Higher Education, as well as the General Directorate of Civil Defence and the Syrian Arab Red Crescent. It is chaired by the Ministry of Foreign Affairs.

Venezuela

National Commission on IHL

On 28 December 2015, the president of Venezuela promulgated the law establishing the National Commission on IHL.[26] The law covers the Commission's composition, organization and functions.

Article 5 provides that the mandate of the Commission includes advising executive and legislative authorities on acceding to international instruments relevant to IHL, as well as preparing draft laws, regulations and instructions to harmonize the State's actions with the principles and norms of IHL. The Commission shall also promote dissemination and integration of IHL into training programmes within university curricula and military doctrine.

In addition, the Commission participates in meetings related to IHL and aims to create commissions of experts following its annual agenda items. It shall also establish relations throughout the region to promote the establishment of national IHL committees in other countries with the purpose of strengthening respect for IHL.

The Commission is composed of representatives of the Ministries of Foreign Affairs, Defence, the Interior, Education, Higher Education, Health and the Attorney General, the National Assembly, the Supreme Court and the Public Prosecutor. It is chaired by the Ministry of Foreign Affairs.

C. Case law

The following section lists, in alphabetical order by country, relevant domestic jurisprudence related to IHL and released during the period under review (July–December 2015). Countries covered are Colombia, Peru and the United Kingdom.

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26 Available at: www.icrc.org/applic/ihl/ihl-nat.nsf/implementingLaws.xsp?documentId=B693766DE0F446B8C1257F3A00327738&action=openDocument&xp_countrySelected=VE&xp_topicSelected=JPAA-9DWC8W&from=state.

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Colombia

Decision T-762 (2015), Colombia Constitutional Court Case on Detention[27]

Keywords: detention conditions, fundamental rights.

On 16 December 2015, the Fifth Review Chamber of the Colombia Constitutional Court issued its Decision T-762 addressing the conditions of detention in sixteen prison facilities.

The Court reaffirms its Decision T-388 of 2013 in declaring the detention conditions contrary to the Constitution of 1991. The ruling describes the current criminal policy as reactive, populist, poorly reflective and inconsistent with security policy. The decision concludes that massive violations of human rights of people deprived of liberty have taken place.

Judges ordered the Congress, government, Attorney General and other controlling institutions to address the criminal policy in a manner which is compliant with human rights. In its decision, the Court invites the ICRC and the national universities of Colombia to assist the Office of the Ombudsman in designing technical rules on deprivation of liberty and to follow up on their implementation nationwide.

Peru

Decision No. 00022–2011-PI/TC, Constitutional Claim against Law No. 29548, Legislative Decrees No. 1094 and 1095[28]

Keywords: military and police courts, IHL application, definition of armed conflict.

On 8 July 2015, the Constitutional Court of Peru rendered its Decision No. 00022–2011-PI/TC based on the constitutional claim against Law No. 29548 and Legislative Decrees No. 1094 and 1095. The decision considers the competence of military tribunals, as well as the applicability of IHL within the Peruvian legal order.

Based on Law No. 29548 of 3 July 2010, the president of Peru promulgated Legislative Decree No. 1094 on the Military and Police Criminal Code and Legislative Decree No. 1095 Regulating the Use of Force by the Armed Forces. In December 2011, 6,430 citizens filed a remedy for unconstitutionality against the three legislations, alleging that they constitute a violation of the right to an independent and impartial judge as well as to the competence of the judiciary by allowing the military courts to judge crimes outside their jurisdiction. In the case

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27   Available at: https://ihl-databases.icrc.org/applic/ihl/ihl-nat.nsf/caseLaw.xsp?documentId=29816281B2B6AE35C1258003002B20E4&action=openDocument&xp_countrySelected=CO&xp_topicSelected=GVAL-992BU6&from=state.

28   Available at: www.icrc.org/applic/ihl/ihl-nat.nsf/caseLaw.xsp?documentId=A9EBF299A99AFF2FC1257FA80050E360&action=openDocument&xp_countrySelected=PE&xp_topicSelected=GVAL-992BU6&from=state.

of Legislative Decree No. 1095, claims were also made on the basis of the restricted role that the armed forces should play in maintaining law and public order. In its decision, the Constitutional Court considered that military and police courts could only judge crimes that are against military or police functions but do not involve fundamental rights. With regard to IHL, the Court decided that crimes of devastation; looting, appropriation and destruction; arbitrary confiscation; confiscation with omission of legal formalities; extortion; illegal contributions; abolition of rights; violations affecting persons protected by IHL; injuring people *hors de combat*; unlawful confinement; and causing damage to the environment could not be judged by military or police courts. Conversely, the Court stated that using forbidden means or methods of warfare, attacks against humanitarian operations, or improper use of the protective emblem could be judged by military courts since they do not interfere with the rights of civilians or combatants.

Further, the judges reaffirmed that IHL is in line with the constitutional legal order and should be considered as the parameter of interpretation of the law during armed conflicts. Therefore, the Court stressed that international human rights law (IHRL) norms are not contrary to IHL. Rather, IHL could be used as *lex specialis* to interpret IHRL rules or national norms during armed conflict situations. Quoting the definition of armed conflict provided by the International Criminal Tribunal for the former Yugoslavia, the Constitutional Court considered that IHL does not apply to situations of internal disturbances and tensions.

Finally, the Court affirmed that the definition of "hostile group" in Legislative Decree No. 1095 should be interpreted in light of the rules of common Article 3 or AP II to determine, on a case-by-case basis, which body of law regulates the use of force.

United Kingdom

Cases No. A2/2014/1862, A2/2014/4084 and A2/2014/4086, 30 July 2015[29]

Keywords: detention in NIACs, extraterritorial application of human rights law.

On 30 July 2015, the Court of Appeal of the Royal Courts of Justice issued its decision on Cases No. A2/2014/1862, A2/2014/4084 and A2/2014/4086, considering the legal basis for the detention by UK forces of an Afghan individual suspected of posing a security threat in Afghanistan.

The defendant was captured by UK armed forces in April 2010, before being handed over to the Afghan security forces in July 2010. The respondent claims that his detention by British armed forces was unlawful.

The Court held that IHL – under treaty or customary basis – does not contain an explicit authority to detain in non-international armed conflicts

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29 Available at: www.icrc.org/applic/ihl/ihl-nat.nsf/caseLaw.xsp?documentId=B24C31F23736046AC12 57FA90046FA63&action=openDocument&xp_countrySelected=GB&xp_topicSelected=GVAL-992BU6& from=state.

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(NIACs) for security reasons. With regard to the relationship between the European Convention on Human Rights and IHL, the judges accepted that IHL "may in certain circumstances operate as a *lex specialis* so as to require the modification of general rules of human rights law". However, the Court considered that these conclusions could not be transposed to the context of a NIAC, where IHL did not provide the legal basis or grounds for detention.

Finally, the Court concluded that the absence of the respondent's opportunity to participate in any reviews or procedural steps concerning his detention violated the irreducible core procedural requirements and safeguards.

Other efforts to strengthen national implementation of IHL

To further its work on implementation of IHL, the ICRC Advisory Service organized, in cooperation with respective host States, or regional or subregional organizations, a high number of national workshops and several regional conferences directed at engaging national authorities in the period under review.

Of particular interest was the Fourth Commonwealth Red Cross and Red Crescent Conference on IHL, co-organized with the Australian Red Cross and the Australian government, with support from the British Red Cross, from 20 to 23 July 2015 in Canberra, Australia. The conference brought together governmental officials and members of National Societies from Australia, the Bahamas, Bangladesh, Botswana, Brunei Darussalam, Canada, the Cook Islands, Cyprus, Fiji, Grenada, India, Jamaica, Kenya, Kiribati, Malaysia, Malawi, the Maldives, Malta, Mauritius, Mozambique, Namibia, Nepal, New Zealand, Nigeria, Pakistan, Papua New Guinea, Samoa, the Seychelles, Singapore, the Solomon Islands, South Africa, Sri Lanka, Swaziland, Switzerland, Tonga, Trinidad and Tobago, Tuvalu, the United Kingdom, Uganda, Vanuatu and Zambia. Among other topics reviewed during the conference, particular attention was given to strengthening legal protection for victims of armed conflict, sexual violence and the repression of IHL violations.

Another event of interest was the 15th Annual Regional Seminar on International Humanitarian Law co-organized by the South African Department of International Relations and Cooperation and the ICRC, from 18 to 21 August 2015 in Pretoria, South Africa. It gathered governmental officials, members of national IHL committees and representatives from regional and subregional organizations from Angola, Botswana, Comoros, the Democratic Republic of the Congo, Kenya, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, the Seychelles, South Africa, Swaziland, Zambia and Zimbabwe. The conference dealt with topics such as the role of national IHL committees in advancing IHL and the 32nd International Conference themes.

BOOKS AND ARTICLES

New IHL handbook

International Humanitarian Law: A Comprehensive Introduction

Nils Melzer
Coordinated by Etienne Kuster

International Humanitarian Law: A Comprehensive Introduction is an introductory handbook that aims to promote and strengthen knowledge of international humanitarian law (IHL) among academics, weapon-bearers, humanitarian workers and media professionals. It presents contemporary issues related to IHL in an accessible and practical style, and in line with the ICRC's reading of the law. That, plus its distinctive format – combining "In a nutshell", "To go further" and thematic textboxes – make it the ideal everyday companion for anyone approaching IHL for the first time and curious about conflict-related matters, as well as for military and humanitarian personnel seeking useful guidance on a vast array of topics.

Main features

- Written by a sought-after author, the core text covers IHL comprehensively in concise and accessible language.
- Short footnotes systematically provide the reader with references to legal provisions in both treaty and customary law.
- "In a nutshell" sections at the beginning of each chapter set out key messages on the main IHL rules.
- "To go further" sections offer a variety of thematic, legal and non-legal references, such as readings, e-learning modules, ICRC movies and pictures from the field and *How Does Law Protect in War?* case studies.
- Thematic textboxes inform the reader about contemporary initiatives and processes aimed at strengthening IHL and protecting persons and property in armed conflict.

BOOK REVIEW

Humanitarian Work Psychology and the Global Development Agenda: Case Studies and Interventions

Ishbel McWha-Hermann, Douglas C. Maynard and Mary O'Neill Berry (eds)*

Book review by Ashley J. Hoffman, North Carolina State University, and **Drew B. Mallory,** Purdue University

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Entrenched in human resources, leadership development and Fortune 500 selection systems, industrial and organizational (I-O) psychology is the study of human psychology in the workplace. I-O psychologists employ an empirical approach to selection, training and performance management in order to improve the profitability and overall success of organizations. I-O psychology has not classically been known for a focus on the humanitarian pursuits and organizations of the world. However, recent years have seen the growth of humanitarian work psychology (HWP) as a subfield of I-O, focused on translating research and application of traditional I-O principles to improving human welfare. With this increased interest in the ability and responsibility of I-O psychologists to contribute to the "greater good" has come a strong call for more information and research on effective methods of transferring I-O across humanitarian contexts. This book is among a growing number of publications taking steps to address the poverty of concrete scholarly literature addressing HWP concerns, but is unique in its approach to and organization of the subject matter. The book is broadly targeted to researchers and practitioners who work within the social sciences (e.g., psychology,

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*   Published by Routledge, London, 2016.

sociology, anthropology), economics or international development fields, as well as professionals who are involved with the United Nations (UN). Uniquely, the volume uses the UN's Millennium Development Goals (MDGs), a set of global aspirations to reduce poverty and improve human well-being, as a thematic matrix into which the chapters and examples are funnelled. By using case examples and thoughtful treatises against this backdrop, the book seeks to address how organizations and the way they work can impact global development in both small- and large-scale operations.

In line with the current enthusiasm within work psychology for applying science for the betterment of humanity (versus corporations), the book seeks to recount the work of organizations and individuals that have contributed to the research and practice of HWP while documenting how these specific contributions have furthered both the field of I-O psychology and the UN's goals related to poverty reduction, social justice and equality. For example, a large project was undertaken by researchers affiliated with the Bill & Melinda Gates Foundation, whereby the authors used traditional I-O psychology principles and research related to goal-setting to improve the motivation and performance of front-line health workers in rural India. This project not only contributed to I-O psychology's understanding of the viability of goal-setting theory in a developing setting, but also improved the distribution of maternal and youth health care.[1] Collectively, the book makes a compelling case that it is possible to both conduct research toward this purpose and make a measurable impact through targeted interventions.

For the practitioner, or for the applied management or psychological scholar, the text is rife with practical applications of a wide spread of completed and ongoing projects. Yet the volume is also packed with descriptive processes that aid and development workers use during the implementation of initiatives, and poignant meditations on the state of the field, the responsibility of I-O psychology in contributing to the greater good, and how the MDGs will dovetail into the Sustainable Development Goals (SDGs). As this book is a collection of research and practice from a variety of professions and interests, the contributors come from different backgrounds, with aid and development workers and practitioners writing alongside traditional I-O psychology scientists. With the authors' welcome menagerie of scholastic and professional backgrounds comes also a colourful showcase of practices in a variety of countries and communities. This addresses the coft-repeated cry to avoid a WEIRD-centric (Western, educated, industrialized, rich, democratic) narrative, particularly in both psychology and the aid and development sector. This assortment is balanced against the contributions of many well-known figures in HWP and the work of many interesting and recognizable organizations. Of note, IBM's projects in Nigeria,[2] the more mainstream processes

1   Rustin Meyer, Ruth Kanfer and Carla Burrus, "Improving Motivation and Performance among Frontline Healthcare Workers in Rural India: The Role of Team-Based Goals and Incentives", in *Humanitarian Work Psychology and the Global Development Agenda*.

2   Mathian Osiki, "Leadership Development via Humanitarian Work: IBM's Efforts in Nigeria", in *Humanitarian Work Psychology and the Global Development Agenda*.

employed in corporate sustainability and the UN's Global Compact partnerships,[3] and the variety of "calls to action"[4,5] all combine into an informative and compelling piece about the state of HWP, the gaps in research and practice, and the roles that need to be created or filled moving forward, such as additional research in developing contexts and the increased relevance of a strong ethical base.

While many similar compendia include a redundant opening chapter, the editors' introduction makes for hearty and essential reading. They provide a strong overview of the MDGs, as well as the burgeoning area of HWP. In addition, readers are offered a tour through the format of the book, split into articles addressing practical applications, specific processes, and reflections and projections, each related to the MDGs. The quick overviews of each chapter and the helpful categorizing visuals that filter the chapters according to UN objective are both helpful inclusions. Similarly, the book's conclusion is not to be missed – it's a poignant piece that leaves the reader feeling a renewed sense of responsibility to "push the boundaries of our discipline" and "move both toward a more psychological approach to international development and humanitarian aid, as well as the more humanitarian treatment of all people in the workplace".[6]

The book is then delineated into three main portions. First, the editors identify those chapters that attend to the application of HWP to the resolution of the MDGs. These chapters largely focus on previous initiatives that have used HWP functionally in order to address tangible issues on the ground. These chapters read as a kind of guidebook of "lessons learned" from experienced practitioners. The second portion of the book highlights the processes and empirical considerations to which one should attend when designing and implementing development work. These research-oriented chapters detail the individual and organizational level predictors and outcomes that may direct the impact and success of aid and development efforts. Finally, the third section of the book emphasizes the role that HWP should take outside of the yoke of the MDGs, particularly delving into the ethical considerations that I-O psychologists at large should examine, how individual contributors can contribute to the global development agenda, and the importance of continued momentum with the advent of the SDGs.

The global community continues to increase in interconnection and access to information. For example, sustainability, once considered a buzzword, has broadened from its original natural environmental conceptualization to encompass the sustainability of corporations within the legal, ethical and social environments in which they exist. It is thus crucial that professional fields such as

3   Sean Cruze, "Organizational Change to Advance Corporate Sustainability: Achieving Greater Societal Impact through Partnerships", in *Humanitarian Work Psychology and the Global Development Agenda*.

4   Telma Viale, "Humanitarian Work Psychology and the Millennium Development Goals: Where Do I Begin?", in *Humanitarian Work Psychology and the Global Development Agenda*.

5   Joel Lefkowitz, "The Maturation of a Profession: A Work Psychology for the New Millennium", in *Humanitarian Work Psychology and the Global Development Agenda*.

6   Mary O'Neill Berry, Ishbel McWha-Hermann and Douglas C. Maynard, "Humanitarian Work Psychology and the Millennium Development Goals: Taking Stock and Looking Forward", in *Humanitarian Work Psychology and the Global Development Agenda*.

I-O psychology also adapt to this change in order to remain relevant to organizations, both domestically and abroad, to speak meaningfully to the true needs of corporations, and to design change management strategies to bring companies and their employees smoothly into the global community. This book admirably highlights the work that has been done to this point, but it also serves as a subtle reminder that the field of psychology (and the area of HWP specifically) has a great deal of research and work to do in order to truly understand and significantly impact the aid and development field. This is evident in some of the idiosyncratic textual and methodological oddities that appear, such as contradictory statistics, contextual holes and omitted final outcomes. Indeed, the most potentially impactful section of the book, which covers empirical studies,[7] has only a few studies that explicitly identify the MDGs affected by the research, and little space has been given by the editors or authors to disclosing how the research outcomes added to the goals' progress or changed practices. Another somewhat overlooked area is the overall language and tone of the book, which will read familiarly to scholars but will undoubtedly seem alien at times to UN and other aid officials, who have called for the field to adapt its presentation to suit the needs of the broader international development community.[8] To address this gap in application, the Society for Industrial-Organizational Psychology has formed an advisory committee, responding to requests from the UN to consult on matters related to the UN Economic and Social Council and engage with the Psychology Coalition at the UN.[9] Nonetheless, far from a deep criticism of the book, we see these misses as honest portrayals of the field at large and welcome reminders of areas for collective improvement.

As mentioned above, there has been a significant dearth of publications related to the subject of HWP, mostly due to the novelty of the topic. There are two quite notable exceptions, however: *Humanitarian Work Psychology*[10] and *Using Industrial-Organizational Psychology for the Greater Good: Helping Those Who Help Others*.[11] Like the present volume, these books are exceptional pieces; though not necessarily required pre-reading, they provide a deep overview of HWP and the role that psychologists can (and should) play in contributing to the betterment of society. *Humanitarian Work Psychology and the Global Development Agenda* is just one in what promises to be a great number of books devoted to highlighting and promoting the work that professionals in the psychology field are doing to further the international development community's

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7   Part II, "Process Considerations in Applying Humanitarian Work Psychology to the Millennium Development Goals", in *Humanitarian Work Psychology and the Global Development Agenda*.

8   Drew B. Mallory *et al.*, "News from the SIOP-United Nations Team", *The Industrial-Organizational Psychologist*, Vol. 52, No. 1, 2014.

9   "SIOP and the United Nations", available at www.siop.org/Prosocial/UN.aspx (accessed in August 2016).

10 Stuart C. Carr, Malcolm MacLachlan and Adrian Furnham (eds), *Humanitarian Work Psychology*, Palgrave MacMillan, London, 2012.

11 Julie Olson-Buchanan, Laura L. Koppes Bryan and Lori Foster Thompson (eds), *Using Industrial-Organizational Psychology for the Greater Good: Helping Those Who Help Others*, Routledge, London, 2013.

work and the new SDGs. It is imperative that psychology continues to publish empirical and theoretical research that speaks to the importance and relevance of the social sciences in solving local and global issues and improving human welfare, without sacrificing the methods and rigour endemic to the field. Professor or practitioner, tyro or old-timer, let this book be a launching point for an improved understanding and appreciation of the nexus between the psychological sciences and the world.

BOOK REVIEW
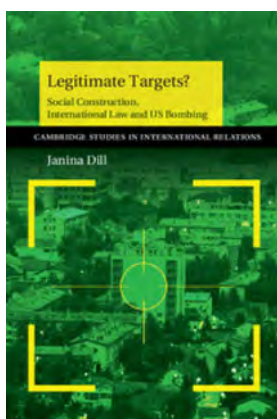
Legitimate Targets? Social Construction, International Law and US Bombing

Janina Dill*

Book review by Dr Bill Boothby, former Deputy Director of Legal Services for the Royal Air Force.

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In this book, Dr Janina Dill[1] takes on the considerable challenge of trying to work out whether international law can effectively regulate the conduct of States in the absence of an independent enforcing authority. She does this by considering the law regulating conduct in war and, more specifically, the effectiveness of international humanitarian law (IHL) in delimiting the scope of legitimate targets of attack in US air campaigns. She uses this discussion as an indicator of the wider ability of international law to regulate State behaviour more generally.

After an introduction to the book, the substantive text is divided among nine chapters and arranged in four parts. Part I, consisting of Chapters 1 and 2, explains the constructivist theory of international law. Why States create international law, why they comply with it and what is distinctive about its norms are the questions that lie at the core of Chapter 1. Chapter 2 then explores the constructivist theory associated with international law. Part II defines the notion of a legitimate target in international law by reference to positive law, in Chapter 3, and in relation to customary law, in Chapter 4. Part III, divided into Chapters 5, 6 and 7, charts the rise of international law in US air warfare thinking, how this impacts on the US interpretation of what is a legitimate target and the extent to which international law is relevant in determining US air warfare behaviour. Part IV comprises Chapters 8 and 9, in which, having

* Published by Cambridge University Press, Cambridge, 2015.

concluded that international law is not normatively successful in US air warfare, the author considers the proposition that normative success for international law in war is impossible. Thereafter there is a concluding section in which the strands of the discussion are brought together.

At the end of the introduction to the book, when faced with the suggestion that widely held normative beliefs imply that, in reality, there are no such things as legitimate targets in war, the reader will be troubled and highly motivated to dig deeper into the ensuing analysis. That digging will be amply rewarded.

In a comprehensive tour of the philosophical theory of law as it applies to international law, the author concludes that "existing scholarship, in law as well as in IR [international relations], casts considerable doubt on [international law]'s ability to be … 'behaviourally relevant'".[2] Chapter 2 then addresses international law's behavioural relevance and comes to the conclusion that international law is indeed dependent on interests and shared normative beliefs, while retaining a character that is distinct from each of those factors; it is a "compromise between pre-existing motivational forces and normative codes" and is thus "dependent, but separate".[3]

In Part II of the book, the focus shifts to how international law defines a legitimate target of attack. The notions of distinction, military objective, proportionality and precautions are all subjected to careful analysis. There are those who would contest the assertion that Article 57(3) of Additional Protocol I (AP I) is subsumed within proportionality or that proportionality *per se* necessitates minimization of collateral damage, but the analysis is persuasive.[4]

The discussion of military objectives is a most valuable feature of *Legitimate Targets?*. As is the case with other topics considered in the book, this discussion examines all matters of contemporary controversy and achieves depth, detail and accuracy. Language and underlying concepts are explored thoroughly, the debate being wisely centred on the pervasive notion of necessity while reflecting and discussing the humanitarianism/military pragmatism trade-off. The inherent indeterminacy of the law, critical in the eyes of some to its realism, becomes the basis for a proper critique, while an evaluation of the salient parts of the AP I negotiating history is used to determine the logics underpinning the interpretation of "military objective" and "proportionality".

Chapter 4 looks at the emergence of corresponding customary law rules, reflecting on US interpretations, in particular by critically exploring the emergence and significance of the "war-sustaining" approach to the definition of military objectives and by evaluating the effects-based approach to targeting. The

1 Janina Dill is Assistant Professor in Normative International Theory in the Department of International Relations at the London School of Economics and Political Science and a Research Fellow of the Oxford Institute for Ethics, Law and Armed Conflict at the University of Oxford. She was previously employed as a Departmental Lecturer in the Department of Politics and International Relations at the University of Oxford.
2 *Legitimate Targets?*, p. 20.
3 *Ibid.*, p. 63.
4 *Ibid.*, pp. 73–74.

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chapter concludes with an insightful appraisal of the challenges one faces when seeking to determine the exact content and meaning of customary law on these, and related, issues.

It is on the basis of this sure, well-rounded appreciation of the relevant legal concepts that Part III of the book sets out to assess whether the definition of lawful targets in war affects how US military decision-makers define a legitimate target. Aerial targeting in the Vietnam War, in the Persian Gulf War and in the Iraq War of 2003 are chosen as the basis for comparison, as the first of these pre-dates the adoption of AP I while the latter two came after its adoption. The resulting discussion, as well referenced and authoritative as the rest of the book, provides a valuable insight into the progressive importance and internalization by air operators of IHL obligations, and thus, a sound basis for the remaining analysis.

Appropriately, the next chapter tackles the targeting activity associated with the three chosen armed conflicts, detecting an evolution from attrition to effects-based approaches to target selection. The analysis of the evolving methodology associated with US targeting choices during the selected campaigns is most illuminating in showing how the basis of US understanding of what constitutes a legitimate target for attack has shifted from a logic of sufficiency, characterized by a focus on accomplishing military advantage, to a logic of efficiency, driven more directly by the wish to accomplish identified political purposes. Noting that aspects of the logic of efficiency may contribute, in part at least, to evolving US approaches to target selection, the approach of personnel to targeting decisions is also carefully assessed.

As the book establishes, precision attack, improved battlefield awareness, emerging doctrine and the wider context for use of force all impact on perceptions as to legitimate targets. However, the sufficiency and efficiency logics imply differing proportions of civilian and military casualties, so in its final phase, the discussion shifts to an assessment of some recent developments in international law in general. Does the growing emphasis on the rights of individuals imply a need for IHL to adopt some kind of liability-based approach in determining who or what gets to be lawfully targeted? Such a contention is properly rejected.

Legitimate Targets? represents a well-informed, well-researched, balanced and all-embracing treatment of a vitally important issue, providing valuable insights to military thinkers, policy specialists, academia and all concerned with ensuring the social acceptability of future military operations. The quality of the scholarship is evident and the resulting analysis is intellectually robust and thorough, while the emerging conclusions are well supported and compelling. In my view, this book takes understanding of this critically important aspect of IHL materially forward, and there can be no greater praise of research than that.

BOOK REVIEW
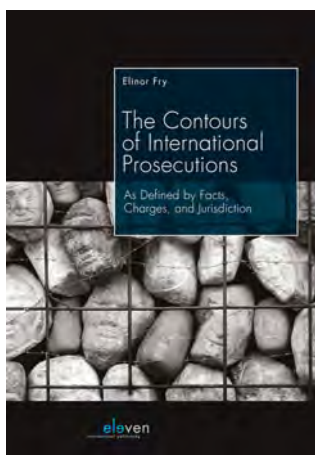
The Contours of International Prosecutions: As Defined by Facts, Charges and Jurisdiction

Elinor Fry*

Book review by Sarah Swart, Regional Legal Advisor at the Pretoria Delegation of the International Committee of the Red Cross.

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The Contours of International Prosecutions, by Elinor Fry, challenges the reader's understanding of a number of well-known principles of international criminal justice by questioning the outer limits of those principles. Divided into three main parts, the book addresses the typical nature of an international crime, the factual demarcation at the case level (effectively, the micro level), and the jurisdictional reach of the International Criminal Court (ICC) (the macro level of one specific international institution). She takes the reader on a journey through the various stages of a criminal prosecution – from the indictment to the facts to the evidence – in order to demonstrate the importance of "a meticulous stance

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towards and respect for the basic building blocks that are the essentials of a criminal prosecution".[1]

In Chapter 2, following an opening chapter setting out the roadmap for her analysis, Fry addresses "The Nature of International Crimes and Evidentiary Challenges". She provides a comprehensive comparison between elements of national and international crimes, and notes the factual and evidentiary complexities involved in prosecuting international crimes. In order to address some of these evidentiary hurdles involved, Fry recommends a search for relevant procedural solutions, and suggests that any such search should consider the unique characteristics of international crimes. She essentially promotes a methodology that focuses on the crime and not on the court. Of particular interest within this chapter is a discussion of the didactic (storytelling) value of court cases – Fry suggests that while it may be a valuable general objective of international criminal justice, setting it as a goal at the trial level will have the consequence of increasing the amount of information relevant to the case. In addition, as a useful annex to these discussions, the author includes two appendices in the book: the first provides a clear visual demonstration of the link between evidence, facts and charges, and the second sets out ten pleading principles for practitioners as identified in international case law.

In Chapter 3, entitled "International Crimes and Case Demarcation: What Are We Trying to Prove?", Fry addresses challenges faced by prosecutors during case demarcation, which she opines are largely due to the vague factual parameters inherent in international crimes. Within the discussion Fry highlights legal demarcation of evidentiary matters, which she asserts has never before been examined in international criminal justice scholarship. By drawing on illuminating experiences from the historical Nuremberg and Tokyo Tribunals, modern-day UN Tribunals (notably the International Criminal Tribunal for Rwanda, the International Criminal Tribunal for the former Yugoslavia, the Special Court for Sierra Leone, the Special Tribunal for Lebanon and the Extraordinary Chambers in the Courts of Cambodia) and the ICC, Fry argues, quite convincingly, that vague indictments at the international level are due largely to a lack of factual specificity but also to evidentiary imprecision.

In Chapter 4, entitled "Legal Recharacterisation and the Materiality of Facts at the ICC: Which Changes are Permissible?", Fry examines Regulation 55 of the ICC Regulations of the Court. This Regulation allows the ICC Chamber to modify the legal characterization of facts in its final judgment as long as the new legal label does not exceed the facts and circumstances described in the charges. Fry attempts to address the question of which changes are permissible under Regulation 55 – a question that she suggests has not yet been explored in a systematic fashion. She suggests that the ICC may have underappreciated the important link between material facts and their legal qualification; evidence does not necessarily equal material fact, and the wide use of Regulation 55 introduces a temptation to ignore the important distinction between material and subsidiary

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1   *The Contours of International Prosecutions*, p. 156.

facts. The author briefly studies the *Ruto, Banda* and *Ntaganda* cases, and asserts that overuse of Regulation 55 by the Court has resulted in a system of charging an accused alternatively. In fact, Regulation 55 provides an exception and should be interpreted narrowly.

Chapters 5 and 6 are notably briefer, and at the same time offer perhaps the most interesting case studies for the reader. Chapter 5, entitled "Between Show Trials and Sham Prosecutions: The Rome Statute's Potential Effect on Domestic Due Process Protections", affords the reader a thought-provoking perspective on the notion of complementarity. Fry recalls Libya's decision to prosecute two of its nationals domestically – nationals for whom ICC arrest warrants had already been issued – and the resulting death penalty handed down in Tripoli for the accused. While the issue of complementarity has been extensively written on, Fry asks some stimulating questions. Does the ICC's complementarity regime influence domestic due process issues? To what extent can the ICC ignore the lack of certain domestic fair trial rights? While Fry doesn't answer all the questions that she raises, she does provide the reader with some food for thought, and proposes in conclusion an approach to complementarity that is "realistic in practice and cautious in its implementation".[2]

Chapter 6, entitled "On the Verge of Engagement: The ICC's Jurisdictional Limits", highlights the usefulness of preliminary examinations but questions whether the expectations on the ICC are realistic. Examining the ICC's problematic jurisdiction over Islamic State fighters as well as the situation in Palestine, Fry notes that the jurisdictional scheme of the Rome Statute is complex and restricted, especially where active nationality is the basis for jurisdiction.

Fry offers a noteworthy take on a number of practical elements concerning prosecutions for international crimes. Given that the first case at the ICC was completed in December 2014 – only two years ago – Fry provides perspectives that could certainly contribute to a "lessons learned" exercise by the Court. *The Contours of International Prosecutions* sets out to explore the boundaries of international criminal jurisdictions, and through six comprehensive chapters, Fry succeeds in raising a number of relevant concerns. The sources used are admirable – Fry references almost 100 books and book chapters alone – and the weight of her research is evident in her writing. While at times the chapters feel slightly disjointed from one another, Fry does manage to tie them together through a constant search for the outer limits of prosecutions. As she writes, "law *is* demarcation".[3]

For those readers who are not experts in international criminal law but merely keen followers of it, *The Contours of International Prosecutions* raises many interesting and valid questions that the reader may not have considered. Upon completion of the book a number of these questions will remain unanswered, but this may have been Fry's intention, in order to demonstrate the complexity of prosecuting international crimes globally and the consequences of

2   *Ibid.*, p. 135.
3   *Ibid.*, p. 151.

how facts and evidence are used, as well as to encourage further research in this area. As such, this book is recommended for individuals wanting to explore deeper research on the various aspects raised by Fry. In general, the book will appeal most to academics and practitioners who are active and well versed in the field of international criminal justice.

The Contours of International Prosecutions is a result of Fry's PhD research, and reads as an academic contribution to ongoing research and debate. I would recommend viewing the book as a collection of individual articles contributing to an overarching objective – Fry has published variations of each chapter as separate academic articles, and seeing them as such may make for an easier read. While the book reads academically, Fry endeavours to add practical examples where possible in order to highlight the real consequences of imposing proper (or improper) boundaries on international criminal prosecutions. Although the various questions raised will undoubtedly contribute to continued scholarship on the theory of international criminal prosecutions, further debate and analysis could also result in a practical influence at the court level.

This is a technical and at times quite complicated read, but one that is well worth the time for those comfortable with international criminal justice lingo and interested in the questions that aren't often asked.

BOOKS AND ARTICLES

New publications in humanitarian action and the law

This selection is based on the new acquisitions of the ICRC's Library and Research Services

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Arms

Articles

Nomi Bar-Yaacov, "Achieving Universality of the Chemical Weapons Convention in the Middle East", *Survival*, Vol. 57, No. 6, 2015–16, pp. 159–180.

Michael Ed Brzoska, "Themenschwerpunkt: Neue Technologien, veränderte Kriegsbilder, neue Ansätze der Rüstungskontrolle?", *S+F, Sicherheit und Frieden – Security and Peace*, Vol. 33, No. 2, 2015, pp. 61–98.

Aaron Gevers, "Is Johnny Five Alive or Did it Short Circuit? Can and Should an Artificially Intelligent Machine be Held Accountable in War or is it Merely a Weapon?", *Rutgers Journal of Law and Public Policy*, Vol. 12, No. 3, 2015, pp. 384–425.

ICRC Library and Research Services

The ICRC's Research and Library Service is a public resource presently offering more than 25,000 books and articles, as well as 300 journals. The collection focuses on international humanitarian law, the work of the ICRC and the International Red Cross and Red Crescent Movement, the challenges of humanitarian work and issues of humanitarian concern in war, and the history and development of armed conflict. Other topics include international criminal law, human rights, weapons, detention, and refugees and displaced persons. The ICRC has acquired publications and periodicals since 1863 and holds specific collections, including rare documents dating back to the foundation of the organization.

Jean-Baptiste Jeangène Vilmer, "Terminator Ethics: faut-il interdire les 'robots tueurs'?", *Politique Étrangère*, No. 4, 2014, pp. 151–167.

Eveylon Corrie and Westbrook Mack, "Remotely Piloted Aircrafts (RPAs) in Targeted Killing Operations: The United States is No Lone Wolf", *Florida Journal of International Law*, Vol. 26, No. 3, 2014, pp. 447–530.

Thilo Marauhn, "The Prohibition to Use Chemical Weapons", *Yearbook of International Humanitarian Law*, Vol. 17, 2014, pp. 25–44.

Nicholas Rostow, "Pandora's Paradoxes: Nuclear Weapons, World Public Order, and International Humanitarian Law", *Israel Yearbook on Human Rights*, Vol. 45, 2015, pp. 107–131.

Christopher P. Toscano, "'Friends of Humans': An Argument for Developing Autonomous Weapons Systems", *Journal of National Security Law and Policy*, Vol. 8, No. 1, 2015, pp. 189–246.

Children

Articles

Cecilia M. Bailliet, "Vulnerability of Children within International Law", *Nordic Journal of International Law: Acta Scandinavica Juris Gentium*, Vol. 84, No. 2, 2015, pp. 153–322.

Sayeman Bula-Bula, "Les atteintes à l'autonomie juridique de l'enfant africain dans la guerre", *African Yearbook of International Law/Annuaire Africain de Droit International*, Vol. 19, 2011–12, pp. 295–323.

Linda Darkwa, "Winning the Battle and Losing the War: Child Rape in Post Conflict Liberia", *International Journal of Children's Rights*, Vol. 23, No. 4, 2015, pp. 790–817.

Ilse Derluyn *et al.*, "Victims and/or Perpetrators? Towards an Interdisciplinary Dialogue on Child Soldiers", *BMC International Health and Human Rights*, Vol. 15, 2015.

Joanna Nicholson, "Is Targeting Naked Child Soldiers a War Crime?", *International Criminal Law Review*, Vol. 16, No. 1, 2016, pp. 134–157.

Marjolein Vlieks, "The Security Council Working Group on Children and Armed Conflict: A Legal Appraisal of Its Application and Development of International Legal Standards", *Human Rights and International Legal Discourse*, Vol. 9, No. 2, 2015, pp. 242–276.

Civilians

Articles

Betcy Jose and Peace A. Medie, "Understanding Why and How Civilians Resort to Self-Protection in Armed Conflict", *International Studies Review*, Vol. 17, No. 4, 2015, pp. 515–535.

David Traven, "Moral Cognition and the Law and Ethics of Armed Conflict", *International Studies Review*, Vol. 17, No. 4, 2015, pp. 556–587.

Conflict, violence and security

Books

Alexander Gillespie, *The Causes of War,* Vol. 1: *3000 BCE to 1000 CE*, Hart Publishing, Oxford and Portland, OR, 2013, 273 pp.

Articles

Steffen Augsberg, "Intelligence! Konflikte und Konfliktvermeidung durch Informationsgewinnung", *Die Friedens-Warte: Journal of International Peace and Organization*, Vol. 90, No. 1–2, 2015, pp. 13–130.

Robert J. Butler *et al.*, "International Engagement on Cyber 2012: Establishing Norms and Improving Security", *Georgetown Journal of International Affairs*, 2012.

Mikael Eriksson and Peter Wallensteen, "Targeting Sanctions and Ending Armed Conflicts: First Steps towards a New Research Agenda", *International Affairs*, Vol. 91, No. 6, 2015, pp. 1387–1398.

Tanja Granzow, Andreas Hasenclever and Jan Sändig, "Framing Political Violence: A Micro-Approach to Civil War Studies", *Civil Wars*, Vol. 17, No. 2, 2015, pp. 113–289.

Jörg Noll, Daan van den Wollenberg and Georg Frerks, "The Dilemma of Leaving: Political and Military Exit Strategies", *Netherlands Annual Review of Military Studies*, 2015.

Detention

Articles

Kubo Macák, "A Needle in a Haystack? Locating the Legal Basis for Detention in Non-International Armed Conflict", *Israel Yearbook on Human Rights*, Vol. 45, 2015, pp. 87–106.

Environment

Articles

Michaela Halpern, "Protecting Vulnerable Environments in Armed Conflict: Deficiencies in International Humanitarian Law", *Stanford Journal of International Law*, Vol. 51, No. 2, 2015, pp. 119–146.

Marie Jacobsson, "Protection of the Environment and Air and Missile Warfare: Some Reflections", *Israel Yearbook on Human Rights*, Vol. 45, 2015, pp. 51–66.

Kerstin Rosenow-Williams, "Communicating Climate Risks: A Case Study of the International Red Cross/Red Crescent Movement", *Humanitäres Völkerrecht: Informationsschriften – Journal of International Law of Peace and Armed Conflict*, Vol. 28, 2015, pp. 130–138.

Rüdiger Wolfrum, "The Protection of the Environment in Armed Conflict", *Israel Yearbook on Human Rights*, Vol. 45, 2015, pp. 67–86.

Geopolitics – Africa

Articles

Marc-Antoine Pérouse de Montclos *et al.*, "Géopolitique du Nigeria", *Hérodote: Revue de Géographie et de Géopolitique*, No. 159, 2015, 165 pp.

Geopolitics – Americas

Articles

David García and Richard Skretteberg, "Colombia: Time for Peace: After 50 Years of Civil War", *Perspective: A Humanitarian and International Affairs Magazine*, No. 4, 2015, pp. 10–29.

Geopolitics – Middle East and North Africa

Books

Ben Fishman *et al.*, *North Africa in Transition: The Struggle for Democracies and Institutions*, Adelphi, 2015, 154 pp.

Hebatalla Taha *et al.*, *Egypt after the Spring: Revolt and Reaction*, Adelphi, 2016, 222 pp.

Articles

Mandy Turner and Cherine Hussein, "Israel-Palestine after Oslo: Mapping Transformations and Alternatives in a Time of Deepening Crisis", *Conflict, Security and Development*, Vol. 15, No. 5, 2015, pp. 415–593.

Human rights

Articles

Richard C. Chen, "Suboptimal Human Rights Decision-Making", *Florida State University Law Review*, Vol. 42, No. 3, 2015, pp. 645–705.

Karen Engle, "Anti-Impunity and the Turn to Criminal Law in Human Rights", *Cornell Law Review*, Vol. 100, No. 5, 2015, pp. 1069–1127.

Wolfgang S. Heinz and Nato Abesadze, "Menschenrechtsschutz in bewaffneten Konflikten: Zur Berichterstattung des Hochkommissariats für Menschenrechte der Vereinten Nationen", *Humanitäres Völkerrecht: Informationsschriften – Journal of International Law of Peace and Armed Conflict*, Vol. 28, 2015, pp. 163–170.

Elzbieta Karska *et al.*, "Extraterritorial Scope of Human Rights", *International Community Law Review*, Vol. 17, No. 4–5, 2015, pp. 395–510.

Tim Rene Salomon, "Zum Verhältnis von Menschenrechten und Humanitärem Völkerrecht: Normative und methodische Grundlagen", *Humanitäres Völkerrecht: Informationsschriften – Journal of International Law of Peace and Armed Conflict*, Vol. 28, 2015, pp. 153–162.

Humanitarian aid

Books

Sahar Taghdisi-Rad, *The Political Economy of Aid in Palestine: Relief from Conflict or Development Delayed?*, Routledge, London, 2011.

Articles

Adrian Gallagher, "The Promise of Pillar II: Analysing International Assistance Under the Responsibility to Protect", *International Affairs*, Vol. 91, No. 6, 2015, pp. 1259–1275.

Keiichiro Okimoto, "Humanitarian Activities Carried Out across Borders in Times of Armed Conflict in the Light of State Sovereignty and International

Humanitarian Law", *Yearbook of International Humanitarian Law*, Vol. 17, 2014, pp. 121–143.

Reed M. Wood and Christopher Sullivan, "Doing Harm by Doing Good? The Negative Externalities of Humanitarian Aid Provision during Civil Conflict", *Journal of Politics*, Vol. 77, No. 3, 2015, pp. 736–748.

ICRC – International Red Cross and Red Crescent Movement

Articles

Dorota Dziwoki, "Gefangenenbesuche und Restoring Family Links – Tätigkeiten: Das IKRK und die Suchdienste der Rotkreuz – und Rothalbmondbewegung", *Humanitäres Völkerrecht: Informationsschriften – Journal of International Law of Peace and Armed Conflict*, Vol. 28, 2015, pp. 125–129.

Daniel Palmieri and Irène Herrmann, "International Committee of the Red Cross", *1914–1918 Online: International Encyclopedia of the First World War*, 24 July 2015.

International criminal law

Books

Kirsten Sellars, *"Crimes against Peace" and International Law*, Cambridge University Press, Cambridge, 2013, 316 pp.

Articles

Payam Akhavan *et al.*, "International Court of Justice: Mini-Symposium on the ICJ Judgment in Croatia v. Serbia", *Leiden Journal of International Law*, Vol. 28, No. 4, 2015, pp. 887–951.

Roee Ariav, "Hardly the Tadic of Targeting: Missed Opportunities in the ICTY's Gotovina Judgements", *Israel Law Review*, Vol. 48, No. 3, 2015, pp. 329–355.

Robert Bejesky, "The Abu Ghraib Convictions: A Miscarriage of Justice", *Buffalo Public Interest Law Journal*, Vol. 32, 2013–14, pp. 103–175.

Serge Brammertz, "The Impact of Criminal Prosecutions on Compliance with IHL: Challenges and Perspectives on the Way Forward", *University of Western Australia Law Review*, Vol. 39, No. 1, 2015, pp. 4–28.

Joël Hubrecht *et al.*, "Justice pénale internationale: Un bilan", *Politique Étrangère*, No. 4, 2015, pp. 9–62.

Charles Chernor Jalloh, "The Role of Non-Governmental Organizations in Advancing International Criminal Justice", *African Journal of International Criminal Justice*, Vol. 1, No. 1, 2015, pp. 47–76.

Philipp Kastner, "Domestic War Crimes Trials: Only for 'Others'? Bridging National and International Criminal Law", *University of Western Australia Law Review*, Vol. 39, No. 1, 2015, pp. 29–50.

Geert-Jan Alexander Knoops and Tom Zwart, "The Flotilla Case before the ICC: The Need to Do Justice While Keeping Heaven Intact", *International Criminal Law Review*, Vol. 15, No. 6, 2015, pp. 1069–1097.

Jaime Alberto Sandoval Mesa, "El problema de los límites de la pena de las FARC frente a las propuestas presentadas en las negociaciones de paz en Colombia", *Revue Québecoise de Droit International*, Special Issue, March 2015, pp. 107–127.

Harmen van der Wilt, "Srebrenica: On Joint Criminal Enterprise, Aiding and Abetting and Command Responsibility", *Netherlands International Law Review*, Vol. 62, No. 2, 2015, pp. 229–241.

International humanitarian law – conduct of hostilities

Articles

Tetyana Tanya Krupiy, "Of Souls, Spirits and Ghosts: Transposing the Application of the Rules of Targeting to Lethal Autonomous Robots", *Melbourne Journal of International Law*, Vol. 16, No. 1, 2015, pp. 145–202.

Kaitlin J. Sahni, "The Legality of Invisibility Technology in Modern Warfare", *Georgetown Law Journal*, Vol. 103, No. 6, 2015, pp. 1661–1678.

Kenneth Watkin, "Military Advantage: A Matter of 'Value', Strategy, and Tactics", *Yearbook of International Humanitarian Law*, Vol. 17, 2014, pp. 277–364.

International humanitarian law – general

Articles

Michael Bothe, "*De Facto* Control of Land or Sea Areas: Its Relevance under the Law of Armed Conflict, in Particular Air and Missile Warfare", *Israel Yearbook on Human Rights*, Vol. 45, 2015, pp. 37–50.

Peter Maurer, "The Evolution in the Legal Protection of Victims of Armed Conflict", *Yearbook of International Humanitarian Law*, Vol. 17, 2014, pp. 3–8.

Michael N. Schmitt and Sean Watts, "The Decline of International Humanitarian Law *Opinio Juris* and the Law of Cyber Warfare", *Texas International Law Journal*, Vol. 50, No. 2, 2015, pp. 189–231.

Dale Stephens, "The Age of the Manual: The Impact of the Manual on International Law Applicable to Air and Missile Warfare", *Israel Yearbook on Human Rights*, Vol. 45, 2015, pp. 19–36.

International humanitarian law – implementation

Articles

Denielle Brassil, "Increasing Compliance with International Humanitarian Law through Dissemination", *University of Western Australia Law Review*, Vol. 39, No. 1, 2015, pp. 83–109.

Geoffrey S. Corn and Dru Brenner-Beck, "Exploring U.S. Treaty Practice through a Military Lens", *Harvard Journal of Law and Public Policy*, Vol. 38, No. 2, 2015, pp. 547–628.

Adil Ahmad Haque, "Off Target: Selection, Precaution, and Proportionality in the DoD Manual", *International Law Studies*, Vol. 92, 2016, pp. 31–84.

Annabel McConnachie, "Preventing Breaches of IHL through Dissemination: The Role of National Societies", *University of Western Australia Law Review*, Vol. 39, No. 1, 2015, pp. 68–82.

Milena Sterio, "Drones: A Proposal for New Policy Inclusive of Independent Judicial Oversight", *Wake Forest Journal of Law and Policy*, Vol. 5, No. 2, 2015, pp. 469–511.

Philipp Stöckle, "Recent Developments in German Case Law on Compensation for Violations of International Humanitarian Law", *German Yearbook of International Law*, Vol. 57, 2014, pp. 613–631.

Marcel Stutz, Leonard Blazeby and Netta Goussac, "Strengthening Compliance with International Humanitarian Law: The Work of the ICRC and the Swiss Government", *University of Western Australia Law Review*, Vol. 39, No. 1, 2015, pp. 51–67.

International humanitarian law – law of occupation

Articles

Eugene Kontorovich, "Economic Dealings with Occupied Territories", *Columbia Journal of Transnational Law*, Vol. 53, No. 3, 2015, pp. 584–637.

Yaël Ronen, "A Century of the Law of Occupation", *Yearbook of International Humanitarian Law*, Vol. 17, 2014, pp. 169–188.

Peter M. R. Stirk, "The Concept of Military Occupation in the Era of the French Revolutionary and Napoleonic Wars", *Comparative Legal History*, Vol. 3, No. 1, 2015, pp. 60–84.

International humanitarian law – type of actors

Articles

Andrew Clapham, "The Rights and Responsibilities of Armed Non-State Actors: The Legal Landscape and Issues Surrounding Engagement", Genève, Académie de Droits Humains, February 2010, available at SSRN.

Mohamad Ghazi Janaby, "The Legal Status of Employees of Private Military/Security Companies Participating in U.N. Peacekeeping Operations", *Northwestern Journal of International Human Rights*, Vol. 13, No. 1, 2015, pp. 82–102.

Stefanie Haumer, "Non-State Armed Actors and International Humanitarian Law: A Demanding Relationship?", *Humanitäres Völkerrecht: Informationsschriften – Journal of International Law of Peace and Armed Conflict*, Vol. 28, 2015, pp. 120–125.

Corinna Jentzsch, Stathis Kalyavas and Livia Isabella Schubiger (eds), "Militias in Civil Wars", *Journal of Conflict Resolution: Journal of the Peace Science Society (International)*, Vol. 59, No. 5, 2015, pp. 755–946.

Tilman Rodenhäuser, "International Legal Obligations of Armed Opposition Groups in Syria", *International Review of Law*, Vol. 2015, No. 1, 2015.

Julio Jorge Urbina, "Actores no estatales y externalización de las funciones militares en los conflictos armados: Los contratistas privados ante el derecho internacional humanitario", *Anuario Colombiano de Derecho Internacional*, Vol. 8, 2015, pp. 41–85.

International humanitarian law – type of armed conflict

Articles

Dapo Akande and Lawrence Hill-Cawthorne, "The Lieber Code and the Regulation of Civil War in International Law", *Columbia Journal of Transnational Law*, Vol. 53, No. 3, 2015, pp. 638–651.

Emily Crawford, "From Inter-State and Symmetric to Intra-State and Asymmetric: Changing Methods of Warfare and the Law of Armed Conflict in the 100 Years since World War One", *Yearbook of International Humanitarian Law*, Vol. 17, 2014, pp. 95–118.

Michael L. Gross, "The Ethics of Insurgency: A Brief Overview", *Journal of Military Ethics*, Vol. 14, No. 3–4, 2015, pp. 248–271.

Emilie E. Kuijt, "Legal Challenges in the Provision of Humanitarian Assistance: The Case of Non-International Armed Conflicts", *Yearbook of International Humanitarian Law*, Vol. 17, 2014, pp. 145–166.

Jens David Ohlin, "The Combatant's Privilege in Asymmetric and Covert Conflicts", *Yale Journal of International Law*, Vol. 40, No. 2, 2015, pp. 337–392.

Matthew Rinear, "Armed with a Keyboard: Presidential Directive 20, Cyber-Warfare, and the International Laws of War", *Capital University Law Review*, Vol. 43, No. 3, 2015, pp. 679–720.

Michael N. Schmitt, "The Law of Cyber Targeting", *Naval War College Review*, Vol. 68, No. 2, 2015, pp. 11–29.

Media

Books

Lefèvre Guibert, *Le photographe*, Intégrale, Dupuis, Paris, 2010, 263 pp.

Articles

Freya Foster, "The Price of News from the Front Line: Rethinking the Protection of Media Personnel under International Humanitarian Law", *Journal of Conflict and Security Law*, Vol. 20, No. 3, 2015, pp. 451–480.

Isabel García García, "La protección del periodista: El caso de Siria", *Revista Española de Derecho Militar*, No. 103, 2015, pp. 93–121.

Vered Malka and Yaron Ariel, "Fighting, Worrying and Sharing: Operation 'Protective Edge' as the First WhatsApp War", *Media, War and Conflict*, Vol. 8, No. 3, 2015, pp. 329–344.

Peace

Articles

Kasaija Phillip Apuuli, "The Use of Unmanned Aerial Vehicles and United Nations Peacekeeping: The Case of MONUSCO in the Democratic Republic of the Congo", *African Yearbook of International Law/Annuaire Africain de Droit International*, Vol. 19, No. 1, 2011–12, pp. 325–342.

Protection of cultural property

Articles

Kevin Chamberlain, "Casualties of Armed Conflict: Protecting Cultural Property", *Yearbook of International Humanitarian Law*, Vol. 17, 2014, pp. 189–211.

Sebastián Green Martínez, "Destruction of Cultural Heritage in Northern Mali: A Crime against Humanity?", *Journal of International Criminal Justice*, Vol. 13, No. 5, 2015, pp. 1073–1097.

Marina Lostal Becerril, "Syria's World Cultural Heritage and Individual Criminal Responsibility", *International Review of Law*, Vol. 2015, No. 1, 2015.

Public international law

Books

José Antonio Valles Cavia (ed.), *Los conflictos armados contemporáneos: Construcción de la paz y derechos humanos*, La Catarata, Madrid, 2013, 302 pp.

Articles

Jordan Peagler, "The Stuxnet Attack: A New Form of Warfare and the (In) Applicability of Current International Law", *Arizona Journal of International and Comparative Law*, Vol. 31, No. 2, 2014, pp. 399–434.

Tom Ruys and Luca Ferro, "Weathering the Storm: Legality and Legal Implications of the Saudi-Led Military Intervention in Yemen", *International and Comparative Law Quarterly*, Vol. 65, No. 1, 2016, pp. 61–98.

Michael Staack, "Dekonstruktion von Souveränität: Diskurse zur Legitimierung militärischer Interventionen", *Die Friedens-Warte: Journal of International Peace and Organization*, Vol. 89, No. 3–4, 2014.

Refugees/displaced persons

Articles

Chrysanthus Ache and Charles Riziki Majinge, "International Law as a Mechanism to Advance the Rights of the Displaced in Africa: Examining the Role of the African Union Convention for the Protection and Assistance of the Internally Displaced Persons in Africa", *African Yearbook of International Law/Annuaire Africain de Droit International*, Vol. 18, No. 1, 2010, pp. 413–449.

Marianne Alfsen *et al.*, "Time to Act: Millions of People are Displaced by Disasters and Climate Change", *Perspective: A Humanitarian and International Affairs Magazine*, No. 3, 2015, pp. 10–31.

Vincent Chetail, "The Human Rights of Migrants in General International Law: From Minimum Standards to Fundamental Rights", *Georgetown Immigration Law Journal*, Vol. 28, No. 1, 2013, pp. 225–255.

Ulrike Krause, "A Continuum of Violence? Linking Sexual and Gender-Based Violence during Conflict, Flight, and Encampment", *Refugee Survey Quarterly*, Vol. 34, No. 4, 2015, pp. 1–19.

Milena Sterio, "The Applicability of the Humanitarian Intervention 'Exception' to the Middle Eastern Refugee Crisis: Why the International Community Should Intervene against ISIS", *Transnational Law Review*, Vol. 38, No. 2, 2015, pp. 325–357.

Religion

Articles

Alexander De Juan, "The Role of Intra-Religious Conflicts in Intrastate Wars", *Terrorism and Political Violence*, Vol. 27, No. 4, 2015, pp. 762–780.

Muhammad Munir, "Debates on the Rights of Prisoners of War in Islamic Law", *Islamic Studies*, Vol. 49, No. 4, 2010, pp. 463–492.

Sea warfare

Articles

Wolff Heintschel von Heinegg, "Military Activities in the Exclusive Economic Zone", *Revue Belge de Droit International/Belgian Review of International Law/Belgisch Tijdschrift voor Internationaal Recht*, Vol. 47, No. 1, 2014, pp. 45–64.

Wolff Heintschel von Heinegg, "The Development of the Law of Naval Warfare from the Nineteenth to the Twenty-First Century: Some Select Issues", *Yearbook of International Humanitarian law*, Vol. 17, 2014, pp. 69–93.

Terrorism

Articles

Max Abrahms and Jochen Mierau, "Leadership Matters: The Effects of Targeted Killings on Miliant Group Tactics", *Terrorism and Political Violence*, 2015.

Pierre-Alain Clément *et al.*, "Djihadisme: Nouvelle menace mondiale", *Diplomatie: Affaires Stratégiques et Relations Internationales*, No. 77, 2015, pp. 36–61.

Kinga Julia Tibori Szabó, "Self-Defence and the United States Policy on Drone Strikes", *Journal of Conflict and Security Law*, Vol. 20, No. 3, 2015, pp. 381–413.

Women/gender

Articles

Sara E. Davies and Jacqui True, "Reframing Conflict-Related Sexual and Gender-Based Violence: Bringing Gender Analysis Back In", *Security Dialogue*, Vol. 46, No. 6, 2015, pp. 495–512.

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