

## BOOK REVIEW



# Chemical Control: Regulation of Incapacitating Chemical Agent Weapons, Riot Control Agents and their Means of Delivery

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Imperfections in international arms control agreements are a common outcome of multilateral negotiations. But, they can have significant implications, especially where exceptions are made for specific parties or circumstances, as is the case for the treaty prohibiting chemical weapons. When agreement finally came in late 1992 – after decade-long negotiations – on a Chemical Weapons Convention (CWC), it contained a special provision for law enforcement. With the use of toxicity as a weapon in armed conflict finally beyond the pale, States retained the right – to a certain extent – to use it against their own citizens.

The political and legal compromises made at the time of the negotiations left an uneasy question of double standards, the implications of which are examined in great depth by Michael Crowley in *Chemical Control*.

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Dr Crowley is a long-time expert in the varied weapons that are used and misused for law enforcement, and the associated policy and human rights issues. He holds positions at the University of Bradford and the Omega Research Foundation and draws on a wealth of experience of research in this field, in particular on the use of toxic chemicals as weapons for law enforcement. His research complements work done by a small group of academics, non-governmental organizations working on human rights issues, and international organizations including the International Committee of the Red Cross (ICRC).

Turning to the subject of the book, the CWC's green light for the use of certain toxic chemicals as weapons for "law enforcement including domestic riot control purposes"<sup>1</sup> created two distinct but related problems. The first has been the widespread use and misuse of riot control agents, or "tear gas", as these sensory irritant chemicals are commonly known. And the second, potentially even more concerning, has been the interest among some countries in using highly toxic chemicals – primarily dangerous anaesthetic and sedative drugs – as weapons to incapacitate people by impairing their brain function.

Crowley's book collects the disparate pieces of these two complex problems and examines them in parallel using his "holistic arms control" framework. His approach involves three stages: first, a technical and operational assessment of the weapons in question; second, consideration of the full range of applicable legal obligations and associated control mechanisms; and third, policy proposals for improvements of these mechanisms.

## The problem with tear gas

Riot control agents (or "tear gas"), despite the rather innocuous name, are types of toxic chemicals that cause intense pain and irritation to the eyes and respiratory tract, resulting in severe watering of the eyes, coughing and difficulty breathing – effects that are often accompanied by anxiety and panic. Whilst these effects are intended to be temporary and reversible (lasting no more than thirty minutes), the health risks are very much dependent on the context, as Crowley explains.<sup>2</sup> Depending on the circumstances and intensity of exposure, more severe effects can include vomiting, skin blistering, permanent injury to eyes, skin and lungs, and in extreme circumstances, even death. Use in high concentrations, in enclosed spaces or against vulnerable individuals – for example, children, the elderly, and those suffering from heart and lung conditions – is particularly dangerous.

What is striking for weapons used so frequently in law enforcement operations, as Crowley documents, are the lack of international standards regulating the nature and concentrations of these chemicals,<sup>3</sup> as well as the

1 CWC, Art. II.9(d).

2 *Chemical Control*, pp. 46–50.

3 *Ibid.*, pp. 46–47.

munitions and devices used to deliver them.<sup>4</sup> Much is left to the discretion of weapons manufacturers selling their wares on an expanding international market.

This is even more disquieting given the scale of misuse uncovered by Crowley during a five-year period from 2009 to 2013.<sup>5</sup> Based on reports from the United Nations and non-governmental organizations, he documents the use of riot control agents to facilitate human rights abuses in ninety-five different countries across the globe. He highlights, in particular, the misuse of riot control agents: for torture and ill treatment; in dangerously large quantities and in enclosed spaces, resulting in serious injuries and deaths; for suppression of peaceful demonstrations; and in conjunction with firearms or other weapons, leading to excessive use of force.<sup>6</sup>

The sheer numbers of “tear gas” weapons procured and used in some countries are astonishing considering the requirement under international human rights law to use minimum force for law enforcement. In one example that Crowley cites, 130,000 canisters of tear gas were used during just twenty days of protests.

The overall picture calls for much greater attention to the problem through human rights mechanisms and export control regulations, as well as among States party to the CWC. The latter, as Crowley suggests,<sup>7</sup> would be well advised to more closely consider, among other aspects, their obligation to ensure that the “types and quantities” of riot control agents and their delivery systems used for law enforcement are consistent with those purposes.

Crowley’s reports of sporadic use of tear gas in armed conflict<sup>8</sup> – as well as development of “wide area” munitions that may be incompatible with law enforcement (notably, multiple munition launchers, rocket-propelled grenades, automatic grenade launchers, mortars, large-calibre projectiles, helicopter-launched munitions and even cluster bombs)<sup>9</sup> – are also very worrying given the absolute prohibition, under the CWC and customary international humanitarian law, against using riot control agents as a “method of warfare”. This prohibition has its origins in past incidents of chemical warfare in which the use of tear gas often escalated to use of much more toxic chemicals, such as chlorine and mustard gas, as witnessed in the First World War, in Yemen in the 1960s, and during the Iran–Iraq War in the 1980s. With the contemporary resurgence of chemical warfare in Syria, such risks remain relevant today.

## Re-branding chemical weapons

Alongside the problems posed by misuse of riot control agents, Crowley also examines the interest in, development of and mercifully limited use to date of other, more toxic chemicals as weapons for law enforcement, in particular

4 *Ibid.*, Chapter 4.

5 *Ibid.*, pp. 50–70.

6 *Ibid.*, pp. 70–80.

7 *Ibid.*, p. 270.

8 *Ibid.*, pp. 80–82.

9 *Ibid.*, pp. 94–106.

anaesthetic and sedative drugs that have been described as “incapacitating chemical agents”.

Here the paradox of retaining toxicity as a weapon for law enforcement is much more acute, bordering on the absurd. As Crowley alludes to in a section on historical weapons development,<sup>10</sup> these weapons are a hangover from past military chemical warfare programmes in several countries, which encompassed the pursuit of both “off the rocker” (psychosis-inducing) and “on the floor” (unconsciousness-inducing) drugs as chemical weapons.<sup>11</sup>

Despite the opening for signature of the CWC in early 1993, interest in these types of chemicals persisted in some countries, with a view to their use in certain law enforcement situations, such as hostage scenarios. What is shocking, especially for weapons often promoted as “less lethal”, is that some of these chemicals are of comparable toxicity to well-known chemical warfare agents, such as nerve agents (which also affect the central nervous system). Fentanyl and related compounds are good examples of the chemicals in question. Carfentanil is an opioid drug that is chemically related to the morphine you might receive during a serious medical procedure for pain relief and anaesthesia, only 10,000 times stronger. It is used to tranquilize large wild animals, and one small drop is sufficient to kill a person. Fentanyl itself, which is around 500 times stronger than morphine and has a lethal dose of 2 milligrams, has been held responsible for a significant number of recent deaths among heroin users in the European Union and the United States.<sup>12</sup>

The contradictions posed by the use of these dangerous drugs as weapons, and the serious risks to health and life, are crystal clear. However, in the context of discussions among States party to the CWC, these toxic chemicals were for too long separated in the minds of policy-makers by a gulf in vocabulary – “less lethal weapons” instead of “weapons of mass destruction”, and “drugs” instead of “toxic chemicals”. This terminological sleight of hand helped perpetuate an irreconcilable possibility: that chemical agents as toxic as “traditional” chemical warfare agents might be used legitimately as weapons for law enforcement.

However, this perception is now shifting. The ICRC, as Crowley notes, has been at the forefront of efforts to highlight the dangers posed by these weapons, and to emphasize the strict constraints of the full range of international law applying to the use of toxic chemicals as weapons for law enforcement. In February 2013 it issued a policy statement calling on all States to limit any such use to riot control agents only,<sup>13</sup> a position that has been gaining support from an increasing number of States over the past three years.<sup>14</sup>

10 *Ibid.*, pp. 17–19.

11 See also Neil Davison, *“Non-Lethal” Weapons*, Palgrave Macmillan, Basingstoke, 2009, Chapter 5.

12 See, for example, European Monitoring Centre for Drugs and Drug Addiction, “Fentanyl Drug Profile”, 8 January 2015, available at: [www.emcdda.europa.eu/publications/drug-profiles/fentanyl](http://www.emcdda.europa.eu/publications/drug-profiles/fentanyl).

13 ICRC, “ICRC Position on the Use of Toxic Chemicals as Weapons for Law Enforcement”, Statement, 6 February 2013, available at: [www.icrc.org/eng/resources/documents/legal-fact-sheet/2013-02-06-toxic-chemicals-weapons-law-enforcement.htm](http://www.icrc.org/eng/resources/documents/legal-fact-sheet/2013-02-06-toxic-chemicals-weapons-law-enforcement.htm).

14 ICRC, “Conference of the States Parties to the Chemical Weapons Convention, 2015”, Statement, 2 December 2015, available at: [www.icrc.org/en/document/conference-states-parties-chemical-weapons-convention-2015](http://www.icrc.org/en/document/conference-states-parties-chemical-weapons-convention-2015).

It is in relation to the consideration of the full range of States' legal obligations that Crowley's holistic arms control approach has already made an impact by looking beyond circular discussions of the CWC's law enforcement provision and towards other areas of international law that must also be brought to bear on the problem.

An argument that comes through strongly in the book is the importance of obligations under human rights law<sup>15</sup> as well as the under-explored obligations stemming from the near-universal international treaties controlling narcotic drugs, which require that some of these toxic chemicals are only used for medical and scientific purposes.<sup>16</sup> These are legal obligations that States will not be able to ignore should they finally manage, as per Crowley's recommendations<sup>17</sup> and indeed those of the ICRC,<sup>18</sup> to break the fifteen-year deadlock and address this issue at the international level through the policy-making mechanisms of the Organisation for the Prohibition of Chemical Weapons in the Hague.

## The importance of civil society initiatives

Another key issue, to which Crowley devotes the whole of Chapter 12, is the role of civil society in exerting pressure on policy-makers to address these two distinct problems of the misuse of tear gas and the pursuit of dangerous psychoactive drugs as weapons. In particular, the value of meticulous open-source research on weapons development – *Chemical Control* very much included – and the documenting of misuse of specific weapons should not be underestimated in bringing political attention to bear on issues that might otherwise remain hidden in the shadows or relegated to the corridors. Crowley cites two examples of successful civil society initiatives related to riot control agents.<sup>19</sup> The first, which Crowley initiated, was in response to the marketing of military munitions designed for armed conflict and containing riot control agents, which are by their nature prohibited under the CWC as chemical weapons. This directly resulted in actions by those concerned to destroy the munitions and prevent their promotion in the future. The second example was a successful effort by a coalition of non-government organizations to prevent the further shipment of large quantities of “tear gas” munitions to a country where there was good reason for concern that they would be misused.

## Holistic arms control as a new approach

The comprehensive nature of Crowley's holistic arms control approach is both the strength and the weakness of this book. In reviewing all possible legal obligations

15 *Chemical Control*, Chapter 8.

16 *Ibid.*, Chapter 11.

17 *Ibid.*, pp. 268–270.

18 See ICRC, above note 13; ICRC, above note 14.

19 *Chemical Control*, pp. 232–235.

and control mechanisms, Crowley helps identify new avenues to address the core problems identified. However, at times the reader is left with some lack of clarity about which obligations are most important and which avenues might be most fruitful to pursue from a policy perspective.

That said, Crowley does a good job of structuring his research in a way that helps the reader make sense of the technical aspects of these weapons as well as the complex array of applicable international law. One area where the analysis might have been deeper is in the final stage of his holistic arms control assessment, which sets out a strategy to strengthen existing control mechanisms. Here ideas for policy approaches beyond the CWC might have been expanded further.

But Crowley's book is both an invaluable reference and a useful source of new ideas for addressing two problems stemming from the decision by States to prohibit toxicity as a weapon of war while leaving open its use for law enforcement. His holistic arms control concept could even have broader influence and value if applied to legal and policy discussions on a wider range of weapons issues.