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**Geoffrey Chapman, Hassan Elbahtimy, and Susan B. Martin. "The Future of Chemical Weapons: Implications from the Syrian Civil War." *Security Studies* 27:4 (2018): 704-733.**

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**G**eoffrey Chapman, Hassan Elbahtimy, and Susan B. Martin test a framework for assessing the security implications of chemical weapons (CW) use in the twenty-first century in their recent *Security Studies* paper. The authors state that they were motivated by the erosion of a norm of disuse, commonly known as the chemical weapons taboo.<sup>1</sup> In this context, they assess the strategic and tactical utility of CW by the Syrian state as part of its ongoing civil war. Two incidents of CW use are analyzed in detail; one in which a nerve agent was used and another in which gas chlorine was employed. Overall this work has important implications for a more rigorous and better understanding of the use of unconventional weapons in modern warfare.

Before 2012, chemical weapons (CW) were often seen as an artifact of history. As one third of the 'weapons of mass destruction' (WMD) grouping of armaments, CW are the 'poor man's atomic bomb.'<sup>2</sup> Nuclear weapons still hold lasting geostrategic implications for deterrence with a fundamental and unchallenged role in strategic stability. Biological weapons, whose uncertainty is driven by rapidly changing technological drivers and capabilities, were and remain a focus of attention. The role of CW in state-based geopolitics was perceived by many as minor, if not outrightly dismissed as a tool of states in the twenty-first century. CW was relegated to the domain of non-state actors, if thought of at all. A notable example of this was the bipartisan U.S. Commission on the Prevention of Weapons of Mass Destruction, which concluded in 2008 that "unless the world community acts decisively and with great urgency, it is more likely than not that a

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<sup>1</sup> Richard M. Price, *The Chemical Weapons Taboo* (Ithaca: Cornell University Press, 2007).

<sup>2</sup> Michael C. Horowitz and Neil Narang, "Poor Man's Atomic Bomb? Exploring the Relationship between "Weapons of Mass Destruction," *Journal of Conflict Resolution* 58:3 (2013) 509-535. DOI: <https://doi.org/10.1177/0022002713509049>.

weapon of mass destruction will be used in a terrorist attack somewhere in the world by the end of 2013.”<sup>3</sup> It furthered clarified the type of WMD to which they were referring, asserting that “terrorists are more likely to be able to obtain and use a biological weapon than a nuclear weapon.” Chemical weapons were not even considered. Yet, by December 2012 a state had used chemical weapons.

From the chlorine gas attacks of World War I and use of nuclear weapons in WWII through the Cold War and to the present day, limiting the proliferation of unconventional weapons has been a significant international issue. The last decade, however, has brought an intersection of two key drivers that prompt a new way of looking at the geostrategic implications of these weapons and the challenges of limiting proliferation. The first, the changing character of global security threats, began with the fall of the Soviet Union and was punctuated by the terrorist acts of September 11, 2001. Second is the shifting nature of technological progress, which brings entirely new capabilities, many of which are no longer the exclusive domain of a few large states. The perception of the threat of WMD from state and non-state actors continues to increase in scale, scope, and complexity. These drivers offer new opportunities and new challenges for nonproliferation, international security, and foreign policy more broadly.

Countering WMD is among the highest priorities for the U.S. domestic and the international security community in the twenty-first century.<sup>4</sup> Denying the acquisition and use of WMD by hostile states, sub-state

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<sup>3</sup> World At Risk: the Report of the Commission on the Prevention of WMD Proliferation and Terrorism (aka Graham/Talent WMD Commission), 2008, <https://www.loc.gov/item/2009373884/>, xv.

<sup>4</sup> White House, *National Strategy for Countering Weapons of Mass Destruction Terrorism*, December 2018, [https://www.whitehouse.gov/wp-content/uploads/2018/12/20181210\\_National-Strategy-for-Countering-WMD-Terrorism.pdf](https://www.whitehouse.gov/wp-content/uploads/2018/12/20181210_National-Strategy-for-Countering-WMD-Terrorism.pdf); White House, *National Security Strategy*, United States of America, February 2015, [http://www.whitehouse.gov/sites/default/files/docs/2015\\_national\\_security\\_strategy.pdf](http://www.whitehouse.gov/sites/default/files/docs/2015_national_security_strategy.pdf); White House, *National Security Strategy*, United States of America, May 2010, [https://www.whitehouse.gov/sites/default/files/rss\\_viewer/national\\_security\\_strategy.pdf](https://www.whitehouse.gov/sites/default/files/rss_viewer/national_security_strategy.pdf); White House, *National Security Strategy*, United States of America, March 2006, <http://georgewbush-whitehouse.archives.gov/nsc/nss/2006/>; White House, *National Strategy for Countering Biological Threats*, 9 December 2009, [http://www.whitehouse.gov/sites/default/files/National\\_Strategy\\_for\\_Countering\\_BioThreats.pdf](http://www.whitehouse.gov/sites/default/files/National_Strategy_for_Countering_BioThreats.pdf); White House, *National Strategy to Combat Weapons of Mass Destruction*, December 2002, <http://www.state.gov/documents/organization/16092.pdf>; *Department of Defense Strategy to Counter Weapons of Mass Destruction*, June 2014, [http://archive.defense.gov/pubs/DoD\\_Strategy\\_for\\_Countering\\_Weapons\\_of\\_Mass\\_Destruction\\_dated\\_June\\_2014.pdf](http://archive.defense.gov/pubs/DoD_Strategy_for_Countering_Weapons_of_Mass_Destruction_dated_June_2014.pdf); Chairman of the Joint Chiefs of Staff, *National Military Strategy to Combat Weapons of Mass Destruction*, February 2006, <http://www.defense.gov/pdf/NMS-CWMD2006.pdf>; Commission on the Intelligence Capabilities of the United States Regarding Weapons of Mass Destruction, March 2005, <http://govinfo.library.unt.edu/wmd/about.html>; Commission on the Prevention of WMD Proliferation and Terrorism (Graham-Talent Commission), *Prevention of WMD Proliferation and Terrorism Report Card*, 26 January 2010, <http://www.preventwmd.gov/static/docs/report-card.pdf>; Weapons of Mass Destruction Commission (Blix Commission), *Weapons of Terror: Freeing the World of Nuclear, Biological, and Chemical Arms*, Stockholm, Sweden, 1 June 2006, [http://www.wmdcommission.org/files/Weapons\\_of\\_Terror.pdf](http://www.wmdcommission.org/files/Weapons_of_Terror.pdf); *The Weapons of Mass Destruction Commission (WMDC)*, 16 December 2006, <http://www.wmdcommission.org/sida.asp?ID=110>; General Assembly, “Resolution Adopted by General Assembly,” *United Nation’s General Assembly*, 3 January 2007, <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N06/498/63/PDF/N0649863.pdf>; Secretary General of United Nations General Assembly, “The United Nations and Security in a Nuclear-Weapon-Free World,” *Secretary-General’s Address to the East-West Institute of the United Nations*, 24 October 2008, <http://www.un.org/apps/sg/printsgstats.asp?nid=3493>; NATO,

actors, or non-state actors as part of nonproliferation and counterproliferation, coupled with possessing robust capacity to manage potential consequences, are desired strategic ends. Addressing the challenges of countering WMD encompasses both conflict and post-conflict activities centered on securing and destroying material and delivery systems; but, more broadly, it also entails activities intended to address the associated programs, infrastructure, and expertise.<sup>5</sup> It includes activities that span the range of “prevent,” “shape,” “contain,” and “respond” concepts.<sup>6</sup> Proliferation involves a broad range of actors, materials, technologies, activities, and legal considerations, all of which have implications for the roles of military and civilian government departments. Considerations such as risk, time sensitivity, geographic location, and international relations add greater complexity.

Prevention of WMD is a laudable and important goal, but disparities between that objective and the understanding of the geostrategic implications of chemical (and biological) weapons remains as a comparatively nascent and under-theorized field to the rich theoretical work that underpins nuclear proliferation, deterrence, and strategic stability. Greater recognition of that fact is needed in order to affect strategy, and additional levers at the policy level are needed. Part of the challenge in narrowing the gap between strategy and its enabling capabilities and capacities is attributable to multiple endogenous and exogenous military, technical, cultural, policy, and institutional factors.<sup>7</sup> Work like that by the authors and others are necessary if we are to close those gaps for chemical weapons, as well as biological weapons (BW).<sup>8</sup> A robust, analytically-driven understanding of CW and BW also has implications for understanding the international security implications of emerging technologies.

The crux of the question motivating and underlying the work is “whether that use [of CW in Syria] provides new information that will change states’ calculus about acquiring and using them. To do so, the Syrian case would need to demonstrate that states have more to gain—or less to lose—from chemical weapons than

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“Weapons of Mass Destruction,” *NATO*, 27 October 2010, [http://www.nato.int/cps/en/natolive/topics\\_50325.htm](http://www.nato.int/cps/en/natolive/topics_50325.htm); NATO, “Chemical, Biological, Radiological, and Nuclear Defense Battalion,” *NATO*, 26 October 2010, [http://www.nato.int/cps/en/natolive/topics\\_49156.htm](http://www.nato.int/cps/en/natolive/topics_49156.htm).

<sup>5</sup> Rebecca Hersman, *Eliminating Adversary Weapons of Mass Destruction: What’s at Stake*, (Washington D.C.: National Defense University Press, 2004).

<sup>6</sup> *Department of Defense Strategy to Counter Weapons of Mass Destruction*, June 2014, [http://archive.defense.gov/pubs/DoD\\_Strategy\\_for\\_Countering\\_Weapons\\_of\\_Mass\\_Destruction\\_dated\\_June\\_2014.pdf](http://archive.defense.gov/pubs/DoD_Strategy_for_Countering_Weapons_of_Mass_Destruction_dated_June_2014.pdf).

<sup>7</sup> Margaret E. Kosal, “CWMD Strategy Gap: Capacities, Capabilities, and Collaboration,” *PRISM* 7:3 (July 2018) 50-67, <https://www.jstor.org/stable/26470534>.

<sup>8</sup> Gregory D. Koblenz, “Regime Security: A New Theory for Understanding the Proliferation of Chemical and Biological Weapons,” *Contemporary Security Policy* 3:3 (2013) 501-525. DOI: <https://doi.org/10.1080/13523260.2013.842298>; Eric Sterner, “Dictators and Deterrence: Syria’s Assad, Chemical Weapons, and the Threat of U.S. Military Action,” *Comparative Strategy* 33:5 (2014) 407-423. DOI: <https://doi.org/10.1080/01495933.2014.962958>; Philipp C. Bleek and Nicholas J. Kramer, “Eliminating Syria’s chemical weapons: implications for addressing nuclear, biological, and chemical threats,” *The Nonproliferation Review* 23:1-2 (2016) 197-230. DOI: <https://doi.org/10.1080/10736700.2016.1196853>.

previously thought. Only in this circumstance would the Syrian case pose a threat to the CW norm.” (707-708) Through an analysis of two cases of CW use by Syria, Ghouta in August 2013 and the Hama Plains in 2014, the authors assess the tactical utility of CW, its utility as a tool of civilian victimization, and the response by the international community. Based on these factors, the authors assess that CW have limited military capability and provoke a substantive negative response externally, suggesting that other state-based actors are not likely to see CW as having value.

There substantive work by Martin and her colleagues raises a question that remains unanswered: if the explanation for use is based on military utility, what is driving the re-emergence of use of CW by state-actors. Is it a means to erode post-WWII liberal international order, as illustrated by the use of unscheduled, military-grade nerve agents by Russia against former government affiliates living in the UK?<sup>9</sup> Is it to re-enforce control and demonstrate capabilities (at least as far as far small scale production of a third-generation nerve agent, VX), as by DPRK in the assassination of Kim Jong-nam, the estranged half-brother of current North Korea head of state, in a Malaysian airport,

Chemical weapons have been used both by military forces on the battlefield and by terrorists in cities and towns. In this respect, they are unique among the weapons of mass destruction that have been used in the twentieth century and first decades of the twenty-first century. The world’s recognition of the horror of chemical weapons prompted the only disarmament treaty that eliminates an entire category of weapons under strict international verification, enshrining the norm in international law. The 1993 Chemical Weapons Convention (CWC) – a multilateral arms control and disarmament agreement – is central to international limitations on chemical weapons proliferation, reducing the risk of chemical terrorism through the universality of the convention and full implementation of its program.

Regardless of the military utility and motivation for state-based actors to pursue the use of chemical weapons, the situation over the last five years has complicated the international arms control and disarmament processes as part of the Chemical Weapons Convention (CWC). The recently concluded Review Conference (RevCon) of States Parties was marked by accusations of politicization and the erosion of the integrity of the international body that oversees the implementation and execution of the CWC, the Organisation for the Prohibition of Chemical Weapons (OPCW).<sup>10</sup> The RevCon delegate from one state, which is a member of the CWC, characterized the discord over allegations as “bullets of duality” that “split us into a subtle line of ‘us’ and ‘them.’”<sup>11</sup> The United Kingdom asserted that “supporting OPCW attribution is not about choosing sides in big power politics, it is about restoring the global taboo against chemical weapons.”<sup>12</sup> The diplomatic

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<sup>9</sup> Amb Kenneth Ward, Remarks at the Fourth Special Session of the Conference of States Parties to Review the Operation of the Chemical Weapons Convention (REVCON IV), 22 November 2018.

<sup>10</sup> Richard Guthrie, CWC Review Conference Report, #2, 20 November 2018, <http://www.cbw-events.org.uk/CWCRC-4-02.pdf>.

<sup>11</sup> Guthrie, CWC Review Conference Report, #5, 23 November 2018, <http://www.cbw-events.org.uk/CWCRC-4-05.pdf>.

<sup>12</sup> Guthrie, CWC Review Conference Report, #6, 26 November 2018, <http://www.cbw-events.org.uk/CWCRC-4-06.pdf>.

discord was driven by differing contentions surrounding Syrian CW use and the investigation of that use, which makes it directly relevant to the article under review.

The fundamental technology intrinsic to chemical weapons is more widespread than that of any other WMD; synthetic chemistry is ubiquitous to the industrial world. Making chemical weapons requires some technical skill, but over time much of the information needed to make these materials has drifted into the public domain. Technology is rapidly enabling new methods for creating novel agents and easier dissemination. All of which combines, in estimates,<sup>13</sup> to increase terrorist capability and civilian vulnerability to the threat of chemical weapons.

Understanding these changing paradigms and limiting the proliferation of chemical (and biological weapons) for the twenty-first century is necessary. More empirically-driven, analytic work is needed to develop and advance theories that help explain the why states decide to pursue chemical and biological weapons programs, how to deter them, and the geostrategic implications of emerging technologies. More scholarly attention is needed that addresses the political factors driving decisions to pursue or use these weapons (whether by states or non-state actors) and capabilities, as well as more research on the changing nature of technological progress and how it impacts the changing characteristics of warfare. Better theoretical work should enable better policies for prevention and limiting the proliferation of such weapons. The work reviewed here is an important piece in understanding the calculus that states use in deciding to pursue, develop, and use unconventional weapons.

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<sup>13</sup> Margaret E. Kosal. "Near Term Threats of Chemical Weapons Terrorism," in *Globalization and WMD Proliferation: Terrorism, Transnational Networks and International Security*, edited by James Russell and James Wirtz (Routledge, 2009), 63-78; Margaret E. Kosal, "U.S. Policies to Reduce the Threat of Chemical Terrorism," Prepared for The Partnership for a Secure America, 9/11 + 6 Initiative Foreign Policy Priorities for a Secure America, May 2008.