

M. Bhushan, *Silent Weapons Deadly Weapons: Unveiling The Bioweapons Arms Race*, Pathak Publishers and Distributors, 2024, pp. 148.

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This timely book examines the evolving threat landscape of lethal chemical and biological weapons (CBW) and toxins. It places them in the broader context of key global events like the Cold War, debates about their ethical use, treaties, and their exploitative use by State actors since the 20th century. As rightly stated by the author, the use of CBW is a grey-zone tactic, granting those partaking in its weaponisation, plausible deniability in the event of public condemnation upon discovery of its application.

Interestingly, it has frequently been emphasized throughout the book that treaties or initiatives to counter the use of CBW induce a reverse psychological effect on those using them against enemy entities or those deemed collateral damage in pursuit of apparent *scientific* discovery. That is, instead of acting as a deterrent, they encourage their users to cultivate more lethal CBW innovations to inflict greater damage on the human race and erode efforts to regulate the use of chemical and biological agents. This is relevant across the 20th and 21st centuries as some of the most critical milestones, including the Geneva Protocol¹, or international organizations like the United Nations have floundered in restraining CBW's unlawful use.

At the same time, it has been underscored in the book that vested national interests of dominant State actors like the United States, supported by the United Kingdom, have often proved to be the main obstacle in addressing security challenges related to CBW. Such countries, in a bid to seize control of prized information or to fulfill objectives such as ensuring regime change in Cuba or securing a kinetic victory in the Korean War, have thwarted attempts to enforce effective regulatory mechanisms and hold

perpetrators like the Japanese Unit 731² accountable for their war crimes.

Moreover, the rapidly evolving dual-use of chemical and biological agents for civil and military purposes and the challenges that arise in monitoring and regulating their use globally, are a stark reminder of the danger that humankind faces. The author has also provided valuable insights into the multi-fold security challenges faced by India from China, Pakistan, and the terrorist groups that owe their patronage to Islamabad, while exploring India's experiences dealing with CBW threats and those that might arise due to the China-Pakistan nexus in the future.

Nonetheless, loopholes and questions still remain unanswered and that must be addressed. Despite the author mentioning how CBW are ripe for exploitation by State and non-State actors, the latter's involvement has been vaguely referred to. The book would also have been further enriched with references to credible and recorded case studies of using CBW by non-State actors, independently or aided and abetted by State actors. If no such recorded instance is available, it would have served the book and its audience better if this information had been highlighted at the outset.

Additionally, to create a more nuanced understanding of the subject, an understanding of how geopolitics and geo-economics shaped key debates and events related to CBW – including Weapons of Mass Destruction (WMD) – would have created a more grounded understanding of State behaviour on the international stage. For example, detailing the events in the lead-up to and the foreign policy objectives behind the American invasion of Iraq, carried out under the pretext of dismantling Saddam Hussein's non-existent WMD Programme in 2003,³ would have made this a more accessible read for a much broader audience.

While the book examines the impact of CBW on a State's economy, it is also necessary to consider how a niche war economy has been or could be created in the future with the sale and purchase of associated weapons, materials, or equipment in the near future through the advent of metaverse. This technological development– albeit in its initial stages– as foretold by experts, can potentially create a conducive ecosystem, an amalgamation of augmented and virtual reality, for extremists to congregate and carry out their activities while evading surveillance.⁴

Furthermore, as cryptocurrency is steadily gaining ground, it has become imperative to assess how virtually untraceable digital wallets advanced by platforms like Monero⁵ can be exploited by nefarious actors to procure and make accessible to allies of CBW or their associated components to avoid scrutiny on the world stage. This could be particularly used by actors looking to subvert rival entities' national security and territorial integrity.

Finally, despite the emphasis on cooperation and intelligence-sharing to counter the escalating threat posed by CBW, it is crucial to refrain from attaching overwhelming importance to the subject. Competing national interests, especially amid rising geopolitical contestations and armed conflicts raging worldwide, have prevented tangible and long-term multilateral cooperation from fructifying globally.

Endnotes:

¹ “Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare”, United Nations Office for Disarmament Affairs, 1925. Accessed December 31, 2024

² “Human Experimentation at Unit 731”, Pacific Atrocities Education, n.d. Accessed December 31, 2024

- ³ Julian King, “Weapons of Mass Self-Destruction: How United States Foreign Policy in Iraq Backfired”, *The Student Strategy & Security Journal*, 2 (3), n.d., pp. 107-113, Accessed December 31, 2024
- ⁴ Joel S. Elson, Austin C. Doctorand Sam Hunter, “The Metaverse Offers a Future Full of Potential–For Terrorists and Extremists, Too”, *The Conversation*, 7 January 2022. Accessed December 31, 2024
- ⁵ “What is Monero (XMR)?”, *Monero*, Accessed December 31, 2024