

# Humanitarian bullets and man-killers: Revisiting the history of arms regulation in the late nineteenth century

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## Abstract

*In 1899, the delegates at the first Hague Peace Conference outlawed the use of expanding bullets in warfare. Also known as “dum-dum” bullets, their prohibition was largely the product of a media spectacle that evolved around their use in British colonial warfare, a spectacle that focused particularly on the ghastly nature of the wounds these bullets inflicted. This article revisits the “dum-dum” controversy of the 1890s as it played out in the Anglo-European public sphere. It argues, firstly, that there was nothing all that innovative about employing the*

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*principle of expansion in rifle ammunition. Secondly, it shows that controversies around bullets and their wounds had existed since the invention of industrially produced military rifles – and soft-lead ammunition – in the 1850s. In 1868, the St Petersburg Declaration outlawed the use of exploding projectiles for many of the same reasons for which expanding ammunition would also be banned in 1899. The article also shows that many of the ideas mobilized in the early 1890s to promote a new range of cordite-powered full-metal-jacket bullets because of the supposedly “clean” and “humanitarian” wounds that they inflicted offer an important context in which to read and explain the prohibition of “man-slaying” expanding ammunition. Above all, the article highlights how powerful racist thinking and imperial imperatives were to the framers of the laws of war at the turn of the twentieth century.*

**Keywords:** small arms ammunition, dum-dum bullets, St Petersburg Convention of 1868, 1899 Hague Conventions, expanding ammunition, international law of war, armaments regulation, colonial warfare.

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In 1899, the delegates gathered at the Hague Peace Conference adopted a peculiarly specific declaration. Its signatories agreed to “abstain from 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”.<sup>1</sup> The British military manufactured these modified Mark II bullets at its Dum Dum Arsenal, situated on the outskirts of Calcutta (Kolkata), starting in 1895, and utilized them on India’s Northwest Frontier as well as in the Sudan in 1898. At the massacre at Omdurman that year, British soldiers shooting filed-down Mark II bullets (see [Figure 1](#)) wreaked havoc on their Mahdist enemies.<sup>2</sup> As their battle reports noted, these “dum-dum bullets” inflicted the most horrendous wounds, the “terrible severity” of which caused tens of thousands of casualties. Even two days after the event, severely wounded men were left to die untended at the scene of battle.<sup>3</sup> It was not the neglect of the wounded at Omdurman that caused controversy in the Anglo-European media in 1898, however, but rather the graphic nature (see [Figure 2](#)) of the dum-dum bullets’ wounding power.<sup>4</sup> British medical officers related how these wounds were “large, jagged and torn”, with “great damage done

- 1 Declaration (IV, 3) concerning Expanding Bullets, The Hague, 29 July 1899, available at: <https://tinyurl.com/ymp4f7y6> (all internet references were accessed in July 2022).
- 2 John Meredith, *Omdurman Diaries 1898: Eyewitness Accounts of the Legendary Campaign*, Leo Cooper, London, 1998, pp. 25, 33–34; Michelle Gordon, *Extreme Violence and the “British Way”: Colonial Warfare in Perak, Sierra Leone and Sudan*, Bloomsbury, London, 2021, p. 159.
- 3 Major H. B. Mathias [?], “Report on the Wounds Caused by the New Projectile, Used in the Lee Metford Rifle by the British Division at the Battle of Omdurman”, 24 November 1898, Appendix to Surgeon General W. Taylor, “Notes on the Effects of the Dum Dum Bullet at Khartoum”, 10 December 1898, in War Office, “General and Warlike Stores: Ammunition (Code 45(C)): Reports on Effects of Dum-Dum Bullets Used at Khartoum and Omdurman”, WO 32/7056, National Archives, London. See also M. Gordon, above note 2, p. 138.
- 4 The *Bulletin International des Sociétés de la Croix-Rouge* even considered killing “fanatical” Mahdi wounded to be acceptable: “Les blessés de la bataille d’Omdurman”, *Bulletin International des Sociétés de la Croix-Rouge*, Vol. 30, No. 117, 1899.



DRAWN BY WAL PAGET

The men of the Royal Warwickshire Regiment are here shown altering the service bullet to the Dum-Dum pattern. This is done by filing a portion off the end. After a little practice the men become very proficient at the work. A number of "filers" are shown seated on the ground, with their legs under an inverted railway rail raised about eighteen inches from the ground on stones. Behind them are a certain proportion of "unpackers." The latter unpack the boxes of standard ammunition, which are brought to them by carriers.

FROM A SKETCH BY MAJOR G. W. COCKEY'S

In front of the "filers" sit the "packers," who, as the altered ammunition is passed to them, after it has been gauged by an officer, replace the cartridges in their packages and refill the empty boxes. In this way eight boxes (4,500 rounds) can be altered and repacked in two hours and a half, if fifteen or twenty "filers" are employed, or roughly, about sixty cartridges a minute.

MAKING DUM-DUM BULLETS AT DAMARLI, NEAR BERBER

Figure 1. In the weeks leading up to the Battle of Omdurman in 1898, British soldiers filed down hundreds of thousands of Mark II bullets, turning them into expanding dum-dums. Source: Walter Paget, "Making Dum-Dum Bullets at Damarli, Near Berber", *Graphic* (London), 23 April 1898, p. 500.

to the surrounding parts", while "long bones were found to be extensively shattered, and joints completely disorganised". As Britain's surgeon general explained it at the time, "there is no doubt about the stopping power of this bullet"<sup>5</sup> In expanding and fragmenting on impact, the modified Mark II served to kill.

This article offers a history of the controversy that developed around the use of expanding ammunitions in the 1890s, leading to their prohibition in 1899. At one level, the article reinforces the existing historiography which shows that the Hague Declaration was a product of a media spectacle that revolved around Britain's deployment of dum-dum bullets. As such, the diplomats at The Hague needed a disarmament "success" story to feed to the global media, and banning dum-dum bullets seemed an easy fit.<sup>6</sup> Yet, at another level, the article shows that

5 W. Taylor, above note 3. For more on the violence of the Battle for Omdurman, see Michelle Gordon, "Viewing Violence in the British Empire: Images of Atrocity from the Battle of Omdurman 1898", *Journal of Perpetrator Research*, Vol. 2, No. 2, 2019.

6 For more on The Hague's media spectacle, see Maartje Abbenhuis, *The Hague Conferences in International Politics 1898–1915*, Bloomsbury, London, 2018.

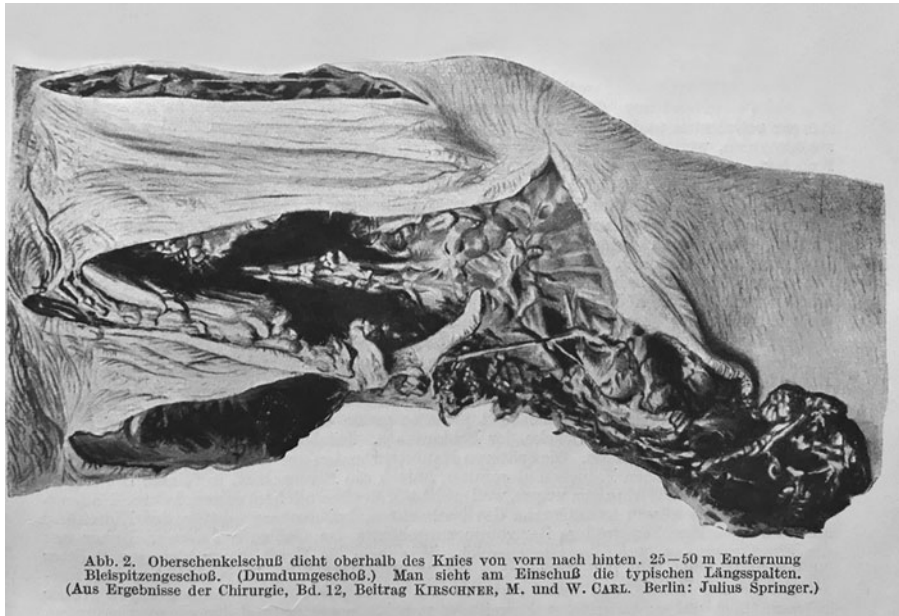


Figure 2. An artistic rendering of a leg wound caused by an expanding bullet (*dumdumgeschoss*). Source: M. Kirschner and W. Carl, “Über Dum-Dum-Verletzungen”, *Ergebnisse der Chirurgie und Orthopadie*, Vol. 12, 1920, p. 653.

Britain’s employment of expanding bullets in the 1890s was not a particularly new or innovative military development. Rather, their adoption signalled a return to earlier rifle patterns – particularly the expanding and hollow-nosed rifle bullets of the 1860s and 1870s. This brought with it a return to the controversies and debates that existed around the use of such ammunition since the signing of the St Petersburg Declaration of 1868. In this sense, the prohibition on expanding bullets in 1899 is anomalous: why regulate this technology now and not earlier? The answer lies, we argue, in the fact that the invention of smokeless gunpowder (in the late 1880s) allowed for the development of full-metal-jacket ammunition like the Mark II, a bullet which did not expand on contact with human skin. These smaller, sleeker, non-expansive bullets were thought to create “cleaner”, less deadly and, thus, more “humanitarian” wounds. Since an alternative to soft-lead ammunition now existed, it opened up the possibility of regulating expansive bullets and their wounds in the laws of war. It also reignited debates about the degrees of violence a soldier could legitimately unleash from their small arms.

Importantly, in all these discussions, the perceived needs of imperial warfare and colonial policing repeatedly reared their ugly heads, for if a “humanitarian” bullet did not kill a “fanatic” or “savage” enemy easily, then for many Anglo-European commentators at the time, expanding bullets and their ghastly wounds were a military necessity. Across the nineteenth century, a key part of the disputes around the use of small arms ammunition focused on

distinguishing among potential enemies. Who should be protected from excessive harm? Who falls outside the terms of the laws of war and might be legitimately targeted by such violence?<sup>7</sup> In this way, the dum-dum controversy of the 1890s reveals as much about the racial and imperial prerogatives embedded in the laws of war as it does about the limits of military and State violence which Anglo-Europeans were willing to accept as legitimate in different scenarios.<sup>8</sup> Above all, the dum-dum spectacle exposes the complex moral interplay at work in the Anglo-European public sphere at the turn of the twentieth century, in which contemporaries questioned the “just” limits of a military force’s “right to kill” and its humanitarian obligation to regulate its violence in proscribed ways.

At The Hague in 1899, the proponents of prohibiting expanding bullets emphatically argued that such projectiles were superfluous to military need, as they did more than merely “stop” an enemy from attacking.<sup>9</sup> Recent improvements in bullet propulsion and design, including the introduction of smokeless gunpowder (cordite) and steel-encased projectiles, enabled the adoption of what they considered to be less deadly rifle ammunitions which, they argued, did the work of “stopping” an enemy just as well. From this perspective, the point of war was to wound an enemy soldier sufficiently to place them *hors de combat* (outside of combat) but not so much as to cause their death. The general ambition was that with excellent medical care, a wounded soldier might make a full recovery and live a full life. According to this interpretation, dum-dum bullets created excessive wounds that either ended a victim’s life or guaranteed their long-term suffering. Those who advocated for banning expanding bullets mobilized evidence from medical reports alongside experiments undertaken on animals and human cadavers to argue that the terms of the St Petersburg Declaration of 1868 should apply.<sup>10</sup> That treaty ruled that armaments which “uselessly aggravate the sufferings of disabled men or render their death inevitable” should be excised from war.<sup>11</sup>

The British delegation at The Hague challenged these claims head-on and argued that the dum-dum bullet was an essential weapon in colonial contexts, and that the bullet’s wounds were not wantonly cruel. Sir John Ardagh explained that the Mark II bullet, a steel-clad cordite-propelled projectile which did not expand

7 For more on this idea, see Joanna Bourke, “Dum-Dum Bullets: Constructing and Deconstructing ‘the Human’”, in Jonathan Obert, Andrew Poe and Austin Sarat (eds), *The Lives of Guns*, Oxford University Press, Oxford, 2019.

8 Cf. Kim Wagner, “Savage Warfare: Violence and the Rule of Colonial Difference in Early British Counterinsurgency”, *History Workshop Journal*, Vol. 85, 2018; J. Bourke, above note 7. See also M. Kirschner and W. Carl, “Über Dum-Dum-Verletzungen”, *Ergebnisse der Chirurgie und Orthopädie*, Vol. 12, 1920, p. 631.

9 M. Abbenhuis, above note 6, pp. 84–85.

10 P. von Bruns, “Inhumane Kriegsgeschosse”, *Archiv für klinische Chirurgie*, Vol. 57, 1898, pp. 602–607; “Special Correspondence”, *British Medical Journal*, 23 April 1898, pp. 1108–1109; P. von Bruns, *Über die Wirkung der neuesten englischen Armeegeschosse*, Tübingen, 1899; “Nouveau projectile Anglais”, *Bulletin International des Sociétés de la Croix-Rouge*, Vol. 30, No. 120, 1899. See also above note 3.

11 Declaration Renouncing the Use, in Time of War, of Explosive Projectiles under 400 Grammes Weight, St Petersburg, 29 November/11 December 1868 (Explosive Projectiles Declaration), available at: <https://tinyurl.com/fszpsvw3>.

on impact, was introduced in 1892 but subsequently proved incapable of “stopping” a “rush of fanatics” or a cavalry charge in actual battle.<sup>12</sup> In other words, the Mark II did not wound horses or determined foes enough. Therefore, the dum-dum adaptation was a necessary military innovation to suppress anti-imperial resistance. At any rate, as Ardagh also made clear, the wounds caused by dum-dum bullets were no worse than those created by the expanding ammunition of older military rifles like the Snider-Enfield (adopted in 1866) or Martini-Henry (adopted in 1871), both of which remained in use in many parts of the world. Ardagh further underlined that soldiers must have confidence in their weapons and that, in imperial settings especially, British troops did not trust that the Mark II disabled their enemies effectively. He also implied that the call to proscribe dum-dums was little more than an opportunistic witch hunt orchestrated by Britain’s rivals. After all, the injunction only targeted this particular British military invention, and not those of any other country.<sup>13</sup> No other government was contemplating the adoption of expanding ammunition for the new cordite-powered military rifles.<sup>14</sup>

In the end, only the US and Portuguese delegations accepted the legitimacy of Ardagh’s arguments: the former refused to ratify the declaration, while the latter abstained from voting on it.<sup>15</sup> Even though the Hague Declaration of 1899 was not binding on Britain, the political implications of the dum-dum prohibition weighed so heavily on the British government that it recalled all expanding bullets from South Africa on the eve of the second Anglo-Boer War (1899–1902) and, subsequently, refused to employ them in China during the Boxer Rebellion (1900) as well. In light of this British compliance, some commentators reflected that the dum-dum declaration was The Hague’s crowning achievement. From this perspective, as Major W. D. Thomson of the 1st Bengal Lancers explained in 1901, the prohibition was a “good example of the progressive spirit of humanity”.<sup>16</sup>

The long-term consequences of the 1899 Hague Declaration were certainly significant. Even today, expanding ammunitions are invoked as harbingers of excessive military harm.<sup>17</sup> We tend to describe all types of expanding ammunition, regardless of their technical differences, as “dum-dums”, and inflect

12 Sir John Ardagh, “Memorandum Respecting Expanding Bullets”, 16 June 1899, in Public Record Office, “Major General Sir John Charles Ardagh: Papers: Peace Conference at The Hague May–July 1899”, PRO 30/40/15, National Archives, London.

13 *Ibid.* Cf. J. Bourke, above note 7, pp. 122–133; M. Abbenhuis, above note 6, p. 108.

14 War Office to Acting Attorney General, 27 August 1896, in War Office, “General and Warlike Stores: Ammunition (Code 45(C)): Experiments with Cup-Headed and Tweedie Bullets: Declaration Renouncing Use of Explosive Bullets under 400 Grammes Weight, St Petersburg, Russia, 1868”, WO 32/7053, National Archives, London.

15 Scott Andrew Keefer, “Building the Palace of Peace: The Hague Conference of 1899 and Arms Control in the Progressive Era”, *Journal of the History of International Law*, Vol. 8, No. 1, 2006, p. 13.

16 W. D. Thomson, “Some Notes on the Peace Convention at The Hague in May 1899, with Its Resultant Effect on the ‘Custom of War’”, *Journal of the Military Services Institution of the United States*, Vol. 28, May 1901, pp. 408–409. See also M. Abbenhuis, above note 6, p. 111.

17 Cf. “Defense Loads of Choice: The Word from the Street” *Gun Digest* (US), 25 March 2013, p. 19; Robin 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, pp. 135, 138–139.

our language around their use with moralistic and derisory overtones. As Joanna Bourke so evocatively contends, “[t]he onomatopoeic nature of the word dum-dum still evokes energy, military prowess and prestige (for its proponents), and racism, cowardice, and cruelty (for opponents)”.<sup>18</sup> Just as importantly, the 1899 dum-dum declaration is considered foundational to international humanitarian law, affirming the principle that the weapons used in lawful wars must avert unnecessary suffering and prevent superfluous injury.<sup>19</sup> In so many ways, dum-dum bullets continue to infuse how we evaluate the “just” limits of military violence in modern international life.

Yet many histories of The Hague’s dum-dum prohibition, much like those of the St Petersburg Declaration of 1868, are mired in inaccuracy, and particularly so when they skirt around the development, production and specificities of the technology in question.<sup>20</sup> Standard accounts of the 1899 Hague Declaration tend to describe the expanding effect of dum-dum bullets as an innovation of the moment, invented by Captain Neville Bertie-Clay and the British Ordnance Department in India in response to the noted deficiencies in the Mark II bullet’s ability to wound Britain’s imperial enemies sufficiently.<sup>21</sup> In reality, the British Ordnance Department experimented with a range of expanding ammunitions from 1895 on. It adopted not only Bertie-Clay’s bullet in India in 1895 but also a new cup-nosed expanding bullet, the Mark IV (see [Figure 3](#)), as its standard-issue service ammunition in 1897. Similarly, many histories of the St Petersburg Declaration either suggest that exploding bullets were a Russian discovery made in 1863 or that they were an untried military experiment whose potential frightened the authorities.<sup>22</sup> In reality, all European armies experimented with exploding and fulminating projectiles in the 1860s.<sup>23</sup> One historian even goes so far as to claim that before dum-dums were invented, European armies only ever used bullets with “sufficient stopping power to disable or render their victim *hors de combat*”, which is absurd given the noted “man-stopping” powers of soft-lead ammunition.<sup>24</sup> All of these assertions oversimplify the contexts in which rifle bullets were developed, employed and debated from the 1850s.

18 J. Bourke, above note 7, p. 122.

19 Robin Coupland, *The STrUS Project: Towards a Determination of which Weapons Cause “Superfluous Injury or Unnecessary Suffering”*, ICRC, Geneva, 1997. Cf. Raphael Schäfer, “The 150th Anniversary of the St Petersburg Declaration: Introductory Reflections on a Janus-Faced Document”, *Journal of the History of International Law*, Vol. 20, No. 4, 2018.

20 One notable exception is the work of Scott Andrew Keefer. Maartje Abbenhuis’s previous work on the history of dum-dums and the Hague Conferences is certainly fuzzy on these technicalities; see M. Abbenhuis, above note 6, p. 109.

21 Cf. Edward M. Spiers, “The Use of Dum-Dum Bullets in Colonial Warfare”, *Journal of Imperial and Commonwealth History*, Vol. 4, No. 1, 1975, p. 4; J. Bourke, above note 7, pp. 123, 125, 129.

22 Emily Crawford, “The Enduring Legacy of the St Petersburg Declaration: Distinction, Military Necessity and the Prohibition of Causing Unnecessary Suffering and Superfluous Injury in IHL”, *Journal of the History of International Law*, Vol. 20, No. 4, 2018, p. 547; Robert Kolb and Momchil Milanov, “The 1868 St Petersburg Declaration on Explosive Projectiles: A Reappraisal”, *Journal of the History of International Law*, Vol. 20, No. 4, 2018, p. 517.

23 For more, see notes 43–50 below.

24 E. M. Spiers, above note 21, p. 3.



### THE ENGLISH DUM-DUM BULLET.

Figure 3. *Scientific American's* rendering of Britain's Mark IV .303-inch calibre service bullet, which the journal misidentified as a dum-dum in 1899. The hollow point (or cup nose) of the Mark IV ensured that it mushroomed on impact, causing significant wounds. The accompanying article explained that while this kind of ammunition might be "doomed for modern warfare", these bullets were nevertheless essential for dealing with "savage tribes" who required more wounding than "civilized" European soldiers. Source: "The English Mark IV Cordite Ammunition", *Scientific American*, Vol. 81, No. 8, 1899, p. 122.

In contrast, this article demonstrates that there was nothing all that new or particularly innovative about expanding ammunition, or the discourses that evolved around its use. Before the invention of cordite in the 1880s, in fact, most rifle bullets were made of soft lead, which expanded, fragmented or deformed on impact, causing terrible wounds and often leading to death. Anyone who hunted with rifles understood these principles of wounding very well, as did most soldiers. The article also demonstrates that at least at the outset, the return to expanding ammunition by the British aimed at making essential improvements to what they considered a faulty military technology (the Mark II .303-inch calibre bullet).<sup>25</sup> The new expanding versions of the .303 ammunition were also intended for use against all enemies, and not only colonial or non-European ones. The Mark IV and Mark V .303-inch rifle bullets that were introduced in 1897 and 1899 respectively had hollow points, which expanded and wounded much like the dum-dum did.<sup>26</sup> Both ammunitions were manufactured at the Woolwich Ordnance Factory and in associated factories across the British Empire.<sup>27</sup> The

25 Cf. Huw Bennett, Michael Finch, Andrei Mamolea and David Morgan-Owen, "Studying Mars and Clio: Or How Not to Write About the Ethics of Military Conduct and Military History", *History Workshop Journal*, Vol. 88, No. 1, 2019.

26 See also E. M. Spiers, above note 21; Scott Andrew Keefer, "'Explosive Missals': International Law, Technology and Security in Nineteenth-Century Disarmament Conferences", *War in History*, Vol. 21, No. 4, 2014.

27 The Colonial Ammunition Company in Auckland, New Zealand, started manufacturing Mark IV bullets in the middle of 1898: Under-Secretary of Defence J. F. Grey to Colonial Ammunition Company, 12 January 1899, and Arthur Douglas, Defence Minister Report, 11 January 1899, both in Army Department, "Inward Letters and Registered Files", AAYS Item # R24395688, New Zealand National Archives. For information on the Colonial Ammunition Company's cartridges, see Barry W. Garcia, *Whitney's Heritage: A Study of Cartridges Manufactured by the Colonial Ammunition Company in New Zealand*, Hawera, 1991, pp. 16–19.



Ordnance Department did not, in fact, stop manufacturing or issuing these expanding bullets to troops until the invention of a new bullet – the Mark VI – in 1906.<sup>28</sup> Even Bertie-Clay's dum-dum cartridges continued to be produced and used in India after 1899.<sup>29</sup> In other words, for the British military authorities in the 1890s, the killing power of expanding bullets was a military necessity in all settings and against all enemies. It took the 1899 Hague prohibition for the British to alter these practices, and even then they did so reluctantly and haphazardly.

This article charts the industrial development of rifle ammunition from the 1850s through to the early 1900s. It focuses on the British Empire particularly and shows how each technological evolution inspired a wide-ranging engagement on its costs and benefits in the Anglo-European media, and especially among lawyers, doctors, military personnel, hunters and politicians. Given that the rifle was an essential military tool but also a vital tool for civilian use, be it for hunting, sport or self-defence, and had been for decades, very few of the ideas presented in the arguments for and against the adoption of dum-dum bullets in the late 1890s were, in fact, all that new. In that sense, this article asserts that while the 1899 dum-dum prohibition may have been a product of a media spectacle, it was also the outcome of decades of public fascination with technological change, rifles and their bullets, and the “just” limits of State and non-State violence.

## The industrial development of rifle ammunition

Before the rifle came the musket. Most muskets required the user to ram gunpowder and a projectile into the bore of the gun before igniting the powder that set the bullet in motion – a time-intensive task for which a soldier had to be standing fully upright, exposed to an enemy's shot.<sup>30</sup> A musket's range was a few hundred yards at best. Rifled muskets, however, became effective military weapons after the invention of paper- or cloth-encased cartridges filled with gunpowder and a conoidal projectile that expanded on propulsion. As it expanded, the bullet gripped the rifled grooves in the gun's barrel and was propelled forward with greater speed, range and accuracy than the smooth-bored musket could offer.<sup>31</sup>

28 Confidential Cabinet Paper, 8 December 1899, in “MS Joseph Chamberlain Papers Relating to Africa”, JC12/3/1-62, in *Nineteenth Century Collections Online*, available at: [www.gale.com/intl/primary-sources/nineteenth-century-collections-online](http://www.gale.com/intl/primary-sources/nineteenth-century-collections-online). See also Scott Andrew Keefer, *The Law of Nations and Britain's Quest for Naval Security: International Law and Arms Control 1898–1914*, Palgrave Macmillan, Houndsmills, 2016, p. 193.

29 S. R. H. Knox, War Office Announcement, 3 March 1900, in War Office, “General and Warlike Stores: Ammunition (Code 45(C)): Future Pattern of Ammunition to be Used in .303 LM Rifle. Future Stocks to Be Held. Military Authorities at Home or Abroad to Use Discretion as to Use”, WO 32/7058, National Archives, London (WO 32/7058).

30 Berkeley R. Lewis, *Small Arms and Ammunition in the United States Service (with 52 Plates)*, Smithsonian Institute, Washington, DC, 1956, p. 167.

31 *Ibid.*, pp. 116–117; Donald Featherston, *Weapons and Equipment of the Victorian Soldier*, Blandford Press, Poole, 1978, pp. 18, 20.

From the 1850s on, breech-loading rifles loaded with cartridges from the side of the gun began to replace smooth-bore muskets. The adoption of industrially manufactured metallic cartridges (as opposed to weather-affected paper or cloth ones) enabled users to reload their breech-loaders while lying down. Alongside massively increasing their rate of fire from sheltered positions, soldiers wielding these guns could strike targets hundreds or, when they were well trained, thousands of metres away.<sup>32</sup> The rifle and its metal cartridges thus presented a revolution in military tactics and ensured that by the 1870s, infantry soldiers had become “more than ever the arm of service upon which all the hard fighting devolves, which inflicts and receives the greatest damage, and to which all other parts of the army are merely subsidiary”.<sup>33</sup> By the early 1890s, military surgeons noted that 80% of battlefield wounds were caused by small arms ammunition.<sup>34</sup> The rifle and its bullets were formidable products of the age of industrialization.

The first effective rifle bullets – such as the Minié projectile – were made from soft lead. What expanded on propulsion to grip the rifled barrel also expanded at the point of termination on hitting a target.<sup>35</sup> In other words, most rifle bullets were expanding ones until the invention of steel-cased bullets in the late 1880s. As a medical treatise published in 1916 explained, these soft-lead bullets “caused enormous destruction of tissue and as the arms from which they were propelled became more and more perfect, the severity of the wounds increased markedly”.<sup>36</sup> It is no wonder that some experts still describe the Minié bullet as the “angel of death”.<sup>37</sup> Many of these soft-lead bullets were made even more expansive when hollowed out – Captain Edward Mounier Boxer’s standard-issue ammunition for the British Snider-Enfield rifle (see [Figure 4](#)) had a hollow nose, for example. This hollowing aided projection and accuracy in flight, tightening the bullet’s centrifugal force and expanding its striking range.<sup>38</sup> The hollow-point also caused awful wounds: as Vivian Dering Majendie and Charles

32 B. R. Lewis, above note 30, p. 119; David Harsanyi, *First Freedom: A Ride Through America’s Enduring History with the Gun*, Threshold Editions, New York, 2018, p. 115; Charles B. Norton, *American Inventions and Improvements in Breech-Loading Arms, Heavy Ordnance, Machine Guns, Magazine Arms, Fixed Ammunition, Pistols, Projectiles, Explosives and Other Munitions of War, including a Chapter on Sporting Arms*, Chapin & Gould, London, 1880, pp. 295–296.

33 As quoted in Bruce W. Menning, *Bayonets before Bullets: The Imperial Russian Army*, Indiana University Press, Bloomington, IN, 1992, p. 51.

34 “Weapons and Wounds in Future Wars”, *British Medical Journal*, 16 January 1892, p. 132. Rapid-firing machine guns, like the Maxim and Gatling, increased the casualty rate. They tended to use the same ammunition as rifles.

35 Øyvind Flatnes, *From Musket to Metallic Cartridge: A Practical History of Black Powder Firearms*, Crowood Press, Wiltshire, 2013, p. 90; D. Harsanyi, above note 32, p. 117.

36 Louis A. la Garde, *Gunshot Injuries: How They Are Inflicted, Their Complications and Treatment*, 2nd ed., William Wood, New York, 1916, p. 35.

37 Chris Kyle with William Doyle, *American Gun: A History of the US in Ten Firearms*, William Morrow, New York, 2013, p. 34.

38 Vivian Dering Majendie and Charles Orde Browne, *Military Breech-Loading Rifles: The Snider, the Martini-Henry and Boxer Ammunition*, Arms and Armour Press, London, 1973 (first published 1870), p. 67.

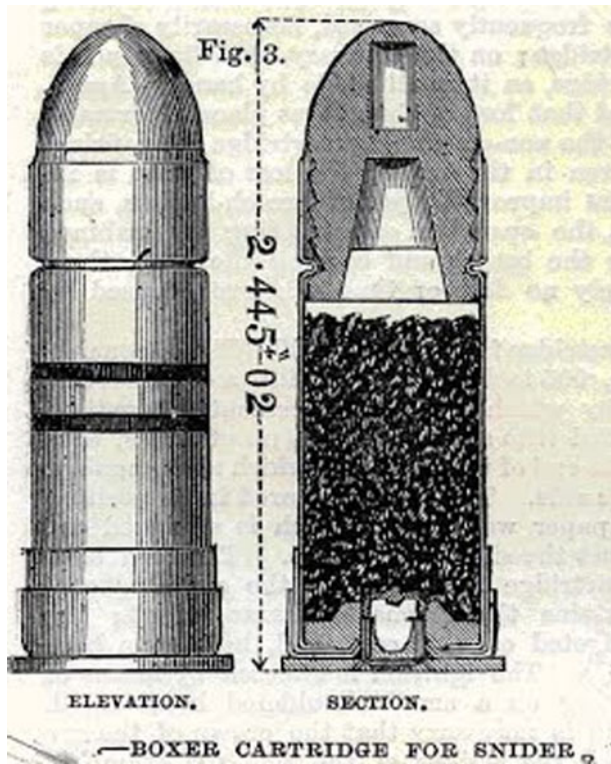


Figure 4. An 1872 rendering of the Boxer cartridge for the British Snider-Enfield rifle, with its hollow-tip nose that was known to cause massive expansion and fragmentation when it hit a target. Source: “Weapons of War V: Breech-Loading Small Arms”, in *Cassell’s Technical Educator: An Encyclopaedia of Technical Education*, Vol. 1, Cassell, London, 1884, p. 272.

Orde Browne’s 1870 treatise on breech-loaders explained, the Boxer cartridge was a “man-stopper that smashed bone and cartilage and left wicked wounds”.<sup>39</sup>

Military doctors in the 1850s and 1860s certainly noted the wounding power of soft-lead ammunition.<sup>40</sup> Henry Dunant’s celebrated account of the battle of Solferino in 1859, for example, discussed cylindrical bullets that “shatter bones into a thousand pieces”, causing wounds that “are always very serious. Shell splinters and conical bullets also cause agonizingly painful fractures, and often frightful internal injuries.”<sup>41</sup> Yet few of these commentators sought to curtail the use of these conoidal bullets; this was because there was no ready

39 D. Featherston, above note 31, p. 25.

40 See, for example, “Medical and Surgical History of the British Army in Turkey and Crimea during the Russian War”, Command Papers, CH Microfiche No. 63.326-339, in *UK Parliamentary Papers*, 1857–1858, p. 859.

41 Henry Dunant, *A Memory of Solferino*, Cassell, London, 1947 (first published 1862), p. 22.

alternative to the rifle as an effective infantry weapon,<sup>42</sup> and for the rifle to work best – at least until the cordite innovations of the 1880s – it required a soft-lead bullet that could grip the gun’s barrel grooves.

## The St Petersburg Declaration of 1868

The St Petersburg Declaration of 1868 is particularly important because it constrained the wounding impact of rifle bullets by prohibiting the insertion of explosive or incendiary powders into the projectile’s cavity. By the late 1860s, an array of exploding bullets existed, most of which were developed by enthusiastic inventors, hunters and weapons manufacturers.<sup>43</sup> As early as the 1820s, Captain John Norton invented an exploding bullet that was set off by an external fuse, which he enthusiastically showed off alongside an array of other inventions at public fairs held across England.<sup>44</sup> In the late 1850s, the British officer John Jacobs (of Jacobabad fame) outfitted his South Asian mercenaries with exploding rifle shells, which were privately manufactured for him in Britain by George Daw.<sup>45</sup> During the US Civil War (1862–65), both armies experimented with exploding ammunition as well, including what were known as Gardner shells.<sup>46</sup> British ordnance factories manufactured exploding bullets for their Metford guns in 1863, while their Russian counterparts designed their own version of the ammunition that same year.<sup>47</sup> The celebrated French hunter Eugène Pertuiset collaborated with the industrialist Leopold Bernard Devisme to produce a range of exploding bullets in the 1860s as well.<sup>48</sup> Meanwhile, Major Fosbery trialled his own version of an exploding bullet in India to help British troops set artillery ranges in the mountains.<sup>49</sup> By 1868, then, most European armies had some form of exploding ammunition in production for their military-issue rifles.<sup>50</sup>

42 Cf. Russell Gilmore, “‘The New Courage’: Rifles and Soldier Individualism 1896–1918”, *Military Affairs*, Vol. 40, No. 3, 1976.

43 For 1850s versions: “Resources of Modern Warfare: Shells, Fuses and Enfield Cartridges”, *Dublin University Magazine*, Vol. 53, June 1859.

44 “War Instruments”, *Illustrated London News*, 2 April 1858.

45 *The Field*, Vol. 9, No. 223, April 1857, p. 230; George H. Daw, *Gun Patents 1864*, Kingsmead Reprints, Trowbridge, 1973; D. Featherston, above note 31, p. 16; Garry James, “General Jacob’s Exotic Rifle”, 2008, available at: [www.myjacobfamily.com/articleskennethjacob/generaljacobarticle.htm](http://www.myjacobfamily.com/articleskennethjacob/generaljacobarticle.htm).

46 Robert V. Bruce, *Lincoln and the Tools of War*, Papamoa Press, San Francisco, CA, 2017, pp. 194–195; Berkeley R. Lewis, “Explosive Bullets”, *Ordnance*, Vol. 38, No. 204, 1954, p. 947; B. R. Lewis, above note 30, pp. 126–128.

47 Ian Skennerton (ed.), *List of Changes in British War Material in Relation to Edged Weapons, Firearms and Associated Ammunitions and Accoutrements*, Vol. 1, Margate, 1980, p. 28; “Mémoire sur la suppression de l’emploi des balles explosives en temps de guerre”, Appendix 1, 1868, in Foreign Office, “Commission Militaire Internationale, Protocole no. 1, 1868”, FO 83/316, National Archives, London (FO 83/316).

48 “The Explosive Bullet: A Fearful Instrument of Warfare”, *Chicago Tribune*, 22 July 1870, p. 1.

49 “Marksman”, *The Times*, 12 December 1868, p. 9; G.V. Fosbery, “Explosive Bullets and their Application to Military Purposes”, *Royal United Services Institution Journal*, Vol. 12, No. 48, 1868.

50 J. R. Cameron, “Incendiary, Tracer and Explosive Bullets”, *Journal of the Royal Army Medical Corps*, Vol. 79, No. 6, 1942, pp. 269–270; Russia Circular St Petersburg 1868, Appendix 1, in FO 83/316, above note 47.

These military elites were also planning on the long-term strategic use of these exploding bullets. Evidence provided by experts at the British Special Committee on Breech-Loading Rifles, which met in 1868, certainly understood their tactical effectiveness. In response to the question, “Is it your opinion that the [exploding rifle] shell has no disadvantage whatever?”, Sir Henry St John Halford, a colonel in the Leicester Volunteers and renowned rifleman, answered:

[I]t has none whatsoever. I have a very strong feeling about the shell. I am almost certain that the French will have these shells at once, and I believe that no troops can stand against them: the moral effect produced is, I am told, fearful.<sup>51</sup>

The Dutch military, for its part, both adopted the Daw-design bullets in 1867 and trialled Pertuiset’s bullets in 1866.<sup>52</sup> Media attention and sensationalism followed these bullets’ use, in part because other forms of explosive weaponry also made headline news, including the Orsini bomb, a home-made exploding device invented to assassinate Emperor Napoleon III in 1858 that killed several innocent bystanders instead.<sup>53</sup>

When the governments at St Petersburg agreed to suspend the military use of “explosive projectiles under 400 grammes in weight” in 1868, they did so mobilizing very strong legal language, namely:

That the progress of civilization should have the effect of alleviating as much as possible the calamities of war;

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 number of men;

That this object would be exceeded by the employment of arms which uselessly aggravate the sufferings of disabled men or render their death inevitable;

That the employment of such arms would, therefore, be contrary to the laws of humanity.<sup>54</sup>

While the language was assertive in its humanitarian intent, the reasons for the adoption of the St Petersburg prohibition were layered with military pragmatism.<sup>55</sup> It is certainly true that a new set of longer-range, faster and more accurate rifle bullets (all expanding, some hollow-nosed) had recently been

51 Henry Charles Fletcher, *Special Committee on Breech-Loading Rifles: Together with Minutes of Evidence etc. etc.*, in House of Commons, *UK Parliamentary Papers*, Vol. 12, No. 1, 1868.

52 J. A. van den Bosch, “Afdeeling XVI”, *Militaire Spectator*, 1 February 1867, p. 79; Paul van ‘t Veer (ed.), A. W. P. Weitzel: *Maar Majesteit! Koning Willem III en Zijn Tijd*, Arbeiderspers, Amsterdam, 2008, pp. 28–29.

53 James Crossland, “Radical Warfare’s First ‘Superweapon’: The Fears, Perceptions and Realities of the Orsini Bomb, 1858–1896”, *Terrorism and Political Violence*, 2021, available at: <https://tinyurl.com/4xbyhat8>. See also “Foreign Intelligence”, *Sunday Times*, 6 March 1859.

54 Explosive Projectiles Declaration, above note 11.

55 Cf. S. A. Keefer, above note 28, p. 40.

invented, including the Boxer cartridge.<sup>56</sup> This ammunition was easier to use than the exploding projectile, even if the latter had its uses for blowing up ammunition dumps or setting artillery gauges. Still, the St Petersburg Declaration was also adopted out of fear that the nature of warfare would change too much if governments allowed their citizen-soldiers to be exploded by the rifle fire of their enemies.<sup>57</sup> As a result, it was the “needlessness” of the exploding bullets in causing disproportional wounds that caught the media’s attention.

Much of the English-language newspaper commentary on the St Petersburg Declaration in 1868 engaged at some level with the idea that “nothing but the strongest necessity” can justify a highly violent act.<sup>58</sup> As an example, in response to the St Petersburg negotiations of 1868, the *The Times* reported on the employment of Major Fosbery’s exploding bullets during the Umbeyla (Ambela) campaign of 1863. The report explained that while the bullets certainly helped to set effective artillery ranges, they could also hit humans. The resulting wounds were so dreadful that the Pathan sent an emissary across the front line to request that the British troops halt their use. A letter to the editor published in *The Times* described these wounds as follows:

In one instance the bullet had entered at the back of the neck and then exploding had entirely blown away the face; and in another, where the ball had struck just over the heart the effect was even more terrible to witness. In such cases an ordinary bullet would have caused death equally well, ... but where a limb or other part of the body, where an ordinary wound would not prove vital, was struck it was, of course, worse for the victim as he could hardly survive the shock to the system, and the advantage to us was *nil*, as in 99 cases out of 100, a simple bullet would have placed him *hors de combat* just as well. It therefore appears that, as a means of destruction, explosive bullets only cause unnecessary mutilation and suffering.<sup>59</sup>

For the author of this letter at least, these wounds were severe enough to prohibit the ammunition’s use in any military setting, colonial or otherwise.

Other commentators were less concerned about the wounding power of the exploding projectiles. They argued that the stronger the weapon, the less likely an enemy would be to engage in war, and that given that all war is horror, restricting the use of a particular weapon on the grounds of the horror it caused was nonsensical. The *Pall Mall Gazette* published a lengthy editorial in June 1868 along these lines. It argued that since a hollow-nosed bullet was as destructive as any exploding bullet, if they were going to ban one on the basis of cruelty, they

56 For specifications of British versions of Boxer and Snider-Enfield bullets, see I. Skennerton (ed.), above note 47, esp. pp. 39–65. See also Ian Beckett, “Retrospective Icon: The Martini-Henry”, in Karen Jones, Giacomo Macola and David Welch (eds), *A Cultural History of Firearms in the Age of Empire*, Ashgate, Farnham, 2013, p. 240.

57 Cf. S. A. Keefer, above note 26, pp. 445–446.

58 Henry Wheaton, *Elements of International Law*, 1st ed., 1866, p. 343.

59 “Marksman”, *The Times*, 12 December 1868, p. 9. See also H. C. Fletcher, above note 51, p. 22; “Imperial Parliament”, *Trewman’s Exeter Flying Post*, 16 December 1868, p. 7; G. V. Fosbery, above note 49.

should also ban the other. At any rate, so the editorial continued, setting a sustainable standard for humanizing warfare was nigh impossible because “war is in itself such great cruelty”.<sup>60</sup> A popular British sports and hunting magazine, the *Field*, concurred, although it also acknowledged that “needless cruelty” should be removed from warfare as in hunting.<sup>61</sup>

Given that most contemporaries understood that warfare already involved rules and restraints, the St Petersburg Declaration was not all that innovative – to condemn exploding bullets was no different from condemning the killing of civilians or the employment of poisonous weapons in time of war.<sup>62</sup> As the Earl of Malmesbury explained in the House of Lords, the explosive bullet was a “diabolical invention” whose use was comparable to these other uncivilized practices.<sup>63</sup> The *Sheffield Daily Telegraph* also observed that “to insist on [missiles] which mangle and shatter after they have disabled their victim is simply a superfluity of barbarity worthy only of wild Indians”.<sup>64</sup> Excessive injury and suffering in time of war was entirely avoidable and, thus, implementing effective bans like this one differentiated “civilized” warriors and nations from “uncivilized” ones.

The racist precepts of these British discourses on acceptable wartime violence are vitally important, not least because the adoption of the St Petersburg Declaration was made binding only on its signatories. If they wished to, the signatory powers could use exploding bullets whenever their enemy was not European “like them”, had not signed up to the decree, or had employed the technology first.<sup>65</sup> Any army could use the ammunition with impunity against colonial enemies or in a police action against a non-State actor. As the *Illustrated London News* exalted in December 1868, these “explosive missiles” are “still available for the conversion of Arabs, Maoris [*sic*], and red Indians. Rose water for our civilised enemies, oil of vitriol for the others.”<sup>66</sup> In this sense, “humanitarian” rules like the St Petersburg Declaration only underlined that in international law, some bodies were considered more woundable than others.<sup>67</sup> Still in keeping with the spirit of the *The Times*’ editorial regarding the 1863 Ambala campaign, any use of illegal technology also invited public questioning and debate. The racial and imperial frameworks in which international law

60 “Cruelty in War”, *Pall Mall Gazette*, 17 June 1868, pp. 1–2. See also “Shell Bullets”, *Pall Mall Gazette*, 28 October 1868; “Explosive Bullets”, *Leeds Mercury*, 19 December 1868.

61 “On the Use and Abuse of Shells in War and Sport”, *The Field*, 31 October 1868, p. 347.

62 Catherine Jefferson, “Origins of the Norm against Chemical Weapons”, *International Affairs*, Vol. 90, No. 3, 2014, pp. 647–648.

63 Earl of Malmesbury in House of Lords, *UK Parliamentary Papers*, 23 July 1868. With thanks to Reuben Bull.

64 “News”, *Sheffield Daily Telegraph*, 12 December 1868, p. 6.

65 S. A. Keefer, above note 28, p. 42.

66 “Nothing in the Papers”, *Illustrated London News*, 5 December 1868, p. 19.

67 Cf. Clapperton Chakanetsa Mavhunga, “Vermin Beings: On Pestiferous Animals and Human Game”, *Social Text*, Vol. 29, No. 1, 2011; J. Bourke, above note 7. On the racialized hierarchies of suffering and pain, see Joanna Bourke, *The Story of Pain: From Prayer to Painkillers*, Oxford University Press, Oxford, 2014, pp. 193, 230; Anupama Rao and Steven Pierce, “Discipline and the Other Body: Humanitarianism, Violence, and the Colonial Exception”, in Anupama Rao and Steven Pierce (eds.), *Discipline and the Other Body: Correction, Corporeality, Colonialism*, Duke University Press, Durham, NC, 2006, pp. 4–5.

operated during the nineteenth century were contested, including among the imperialists themselves.

## Civilian uses of the rifle and its ammunition

Of course, the rifle was more than a tool of war. It also served many civilian functions, including as a tool for hunting, sport, farming, self-defence, crime and policing. By the 1870s, rifles and their varied ammunitions were highly sought-after commodities traded in enormous quantities (both openly and clandestinely). Exploding and expanding ammunitions were prodigiously marketed to consumers by the many private companies that manufactured them. Promoted with evocative names like the “Savage”, “Express” or “Tweedie” bullet, advertisements, sports catalogues and newspaper editorials lauded the excellence of these “man-stopping” projectiles for downing any soft-skinned animal, be it a deer, tiger, bear, whale or, for that matter, human being.<sup>68</sup>

When hunting, of course, it ideally takes one shot to kill – and the bigger the wound, the faster the result. Most Anglo-European hunters agreed that an animal ought not to suffer needlessly;<sup>69</sup> hunting bullets, therefore, ought to cause maximum damage and kill their targets quickly. In a military engagement between “civilized” opponents, however, the opposite was said to be true.<sup>70</sup> Thus, the very bullets that some commentators wished to extricate from military settings for their ability to wound and kill were consumed in vast quantities on the civilian market. In fact, Pertuiset’s exploding bullets gained notoriety in the 1860s in part because of the inventor’s lion-hunting prowess and his well-advertised hunting trips that allowed the wealthy to try out his explosive invention on large game in exotic environments.<sup>71</sup> The painter Édouard Manet immortalized Pertuiset in 1881 in an iconic painting, his double-barrelled hunting gun at the ready, kneeling in front of a downed lion.<sup>72</sup>

## Medical conceptualizations of legitimate rifle wounds

A significant amount of nineteenth-century commentary on rifle bullets and their wounds was also written by medical professionals, who augmented their medical

68 See, for example, W. H. Tisdall Ltd, *Guns, Ammunition, Winter Sports Goods Catalogue*, Christchurch, Wellington, April 1910, in “Ephemera of Octavo Size Relating to Guns, Rifles, Shooting and Ammunition 1900–1910”, Eph-A-GUN-1900/1910, esp. p. 26, Alexander Turnbull Library (ATL), Wellington, New Zealand; Smokeless Powder and Ammunition Co. London, May 1900 price list, in Eph-A-GUN-1900s, esp. p. 30, ATL, Wellington, New Zealand; “Bad News for Whales”, *Illustrated Times* (London), 20 June 1857.

69 Shaun Kingsley Malamey, “Defining the True Hunter: Big Game Hunting, Moral Distinction and Virtuosity in French Colonial Indochina”, *Comparative Studies in Society and History*, Vol. 62, No. 3, 2020, p. 665. For an example, see “A New Form of Mushroom Bullet”, *Scientific American*, 11 May 1907, p. 395.

70 Clinton T. Dent, “A Lecture on Small-Bore Rifle Bullet Wounds and the ‘Humanity’ of the Present War”, *British Medical Journal*, 19 May 1900, p. 1212.

71 These were advertised as far away as the Dutch East Indies: *Java-Bode*, 19 October 1867, p. 2.

72 Édouard Manet, *Portrait of Monsier Pertuiset the Lion Hunter*, 1881, São Paulo Museum of Art, Brazil.



notes from battlefield surgeries with photographs of wounds and experiments on cadavers, as well as accounts of their own hunting experiences and rifle-shooting competition results.<sup>73</sup> In so doing, they passed judgement not only on the nature of wartime wounds and how best to treat them, but also on what levels of violence ought to be allowed within the laws of war. Their medical assessments were steeped in imperial and racial prejudices. Thus, while these doctors uniformly asserted that their primary duty was to extend the lives of soldiers and to minimize suffering,<sup>74</sup> they also differentiated European soldiers, whom they considered uniformly worthy of such care, from non-European troops, whom many (though by no means all) of them considered less worthy of it.<sup>75</sup>

After 1868, the terms of the St Petersburg Declaration also informed much of these individuals' medical commentary. During the Franco-Prussian War, for example, after both belligerents accused their enemy of the "uncivilized" practice of employing exploding bullets, these medical experts readily weighed in.<sup>76</sup> They analyzed battlefield wounds and recovered spent ammunition. They found little evidence to prove that either France or Germany actually used weapons that fit the St Petersburg definition of an exploding bullet (that is, ammunition "of a weight less than 400 grammes which is either explosive or charged with fulminating or inflammable substances").<sup>77</sup> What they did uncover was that many of the wounds created by standard rifle bullets were as destructive as any exploding bullet; subsequent experiments conducted on animals bore out these claims.<sup>78</sup> These findings resulted in various calls to proscribe expansive soft-lead bullets as well as other kinds of excessively destructive weapons, including torpedoes, in the lead-up to the Brussels Convention of 1874.<sup>79</sup> After all, these weapons also caused superfluous wounds and unnecessary suffering. In these

73 Cf. Nisha Shah, "Gunning for War: Infantry Rifles and the Calibration of Lethal Force", *Critical Studies on Security*, Vol. 5, No. 1, 2017; Niko Rohé, "European Medical Experts in Wars of 'Others': The Greco-Turkish War of 1897", *European Review of History*, Vol. 26, No. 2, 2019; Nick Maiden, "Historical Overview of Wound Ballistics Research", *Forensic Science Medical Pathology*, Vol. 5, No. 2, 2009; Nicholas Senn, "The Modern Treatment of Gunshot Wounds in Military Practice", *Military Surgeon*, August 1898; Gwilym G. Davis, "The Effects of Small Calibre Bullets as Used in Military Arms", *Annals of Surgery*, Vol. 25, No. 1, 1897.

74 Thomas Longmore, *Gunshot Injuries: Their History, Characteristic Features, Complications and General Treatment*, Longmans, London, 1877.

75 G. G. Davis, above note 73.

76 See, for example, "The Question of the Employment of Explosive Bullets in the Franco-German War", *British Medical Journal*, 11 March 1871, p. 257; "Latest Telegraphic News: The Civil War in France", *Observer* (London), 30 April 1871, p. 6.

77 Explosive Projectiles Declaration, above note 11.

78 "De la gravité des blessures produites par les projectiles de plomb mou", *Bulletin International des Sociétés de Croix-Rouge*, Vol. 5, No. 20, 1874; "The Action of Modern Bullets on the Animal Body", *British Medical Journal*, 9 May 1874, p. 617.

79 Prince Gortchakow to Count Brunnow, 17 April 1874, in *Miscellaneous No. 1 (1874): Correspondence Respecting the Proposed Conference at Brussels on the Rules of Military Warfare. Presented to both Houses of Parliament by Command of her Majesty 1874*, Harrison and Sons, London, 1874, p. 12. See also S. A. Keefer, above note 28, p. 50; *Revue de Droit International et de Legislation Comparée*, 1875, pp. 527–529.

ways, medical expertise and scientific experimentation matched with legal norms to affirm the limits of the laws of war.<sup>80</sup>

That this commentary also considered the use of exploding bullets in imperial and racial terms is most obvious from an 1870 *Manchester Guardian* editorial that compared the French conscription of Algerian troops to the use of exploding ammunition thusly: “between a Turco and an explosive bullet there appears to us to be small room for choice; and of the two the last is probably the least barbarous”.<sup>81</sup> Still, by the time of the first Anglo-Boer War (1876–77), claims that the Transvaal had stocks of explosive bullets on hand led the British secretary of State for the colonies to demand that “recourse will not be had to so barbarous a method of prosecuting the war”; the use of explosive bullets was “a practice so atrocious in itself, ... condemned by all civilized nations, and is likely even to lead to horrible retaliation by the natives”.<sup>82</sup> Media reports on the Russo-Turkish War of 1877 focused on similar narratives differentiating the employment of “barbarous” rifle ammunition from “civilized” wounding practices.<sup>83</sup> All these reports highlight that well before dum-dum bullets became controversial in the 1890s, Anglo-Europeans debated, questioned, moralized and racialized the wounding power of small arms ammunition.

## Humanitarian bullets and the dum-dum regression

The most important change affecting rifle technology between the 1870s and the 1890s was the introduction of cordite, a smokeless gunpowder that enabled the adoption of smaller-calibre, sleeker bullets encased in hardened non-expanding metals. This new ammunition increased the speed, range and accuracy of rifles; it was also lighter, so it could be carried by soldiers in greater amounts and loaded more easily into repeating weapons like the Maxim and Gatling machine guns. The British version of this new ammunition was the Mark II .303-inch cartridge, which the British forces introduced for their Lee-Metford rifles in 1892. Other versions included Germany’s Mauser and the Austrian Männlicher bullet.

From the outset, military surgeons were keen to assess how these smaller bullets would alter wartime medical practices. Using experiments on animals and cadavers, examples from battlefield surgeries and a degree of conjecture, they argued that at long ranges, the wounds from this new ammunition were more easily treatable than those caused by the larger-calibre bullets used in the older

80 N. Shah, above note 73; Cédric Cotter and Ellen Policinski, “A History of Violence: The Development of International Humanitarian Law Reflected in the *International Review of the Red Cross*”, *Journal of International Humanitarian Legal Studies*, Vol. 11, No. 1, 2020. See also “Effets des balles de fusil modernes”, *Bulletin International des Sociétés de Croix-Rouge*, Vol. 16, No. 64, 1885.

81 “Summary of News: Foreign”, *Manchester Guardian*, 24 August 1870.

82 Earl of Carnarvon to Governor Sir H. Barkly, 30 September 1876, in House of Lords, *UK Parliamentary Papers*, 1876. With thanks to Reuben Bull.

83 “What is an Explosive Bullet? How They Are Made – the Disadvantages of Using Them”, *New York Times*, 12 November 1877, p. 2.

rifles.<sup>84</sup> The solid bullets made cleaner, less ragged wounds than the older expanding ones. Thus, as long as a wounded soldier could reach a surgeon quickly, their lives could more easily be saved. While they were cautiously optimistic about the potential of the new “humanitarian” bullets to save lives,<sup>85</sup> some of the surgeons also remarked that military hospitals would need to be moved further away from the battlefield in order to stay out of the bullets’ range. They further urged that all soldiers be given first-aid training so that any wounded could reach the hospital before their “clean” wounds bled out.<sup>86</sup> The most thoughtful surgical analysts, however, urged another note of caution, namely that at short ranges, there was very little that distinguished the wounding power of this cordite ammunition from any previous rifle cartridge.<sup>87</sup> This last point was generally lost on the reading public, however, who were more interested in the “humanitarian” claims associated with these bullets.

The British military authorities certainly regretted the adoption of these “clean” bullets in 1892. Their experiences with Mark IIs at Chitral and Malakand were highly discouraging, in large part because the bullets did not kill enough of the enemy. As one British newspaper reported it, the bullets “cause very little pain to those who are struck by them”,<sup>88</sup> and that was a problem when facing a “rush of fanatics” who would not hesitate to kill a European soldier by the most brutal means if given half a chance.<sup>89</sup> Sensational stories of a man in Chitral who was struck five times by Mark II bullets but then walked home to heal made headline news around the Empire, and continued to be a recurring trope in

84 “Weapons and Wounds”, above note 34, p. 132; “The Wounds Inflicted by the Lee-Metford Rifle”, *British Medical Journal*, 14 October 1893, pp. 852–853; “Among the Wounded in Manchuria”, *British Medical Journal*, 13 April 1895, p. 823; G. G. Davis, above note 73, p. 50.

85 Ken Daimaru, “Entre blessures de guerre et guerre des blessures: La ‘balle humanitaire’ en débat en Europe et au Japon 1890–1905”, *Le Mouvement Sociale*, No. 257, 2016, pp. 93, 96–98; Theodore James, “Gunshot Wounds of the South African War”, *Suid-Afrika Mediese Tydskrif*, 9 October 1971, p. 1093; C. T. Dent, above note 70, p. 1209; “Experiments at Spandau on 2 April 1892, to Illustrate the Penetration of the ’71-’84 11 mm. (0.433 inch), and ’88 Pattern, 8 mm (0.315 inch) German Rifles”, DMO/10/10, TS British Library, Ministry of Defense Maps, in *Nineteenth Century Collections Online*; Henri Charles-Lavauzell, *Les balles humanitaires et leurs blessures: Mode d’action des projectiles à chemise métalliques dures*, Paris, 1899; Patrick Greiffenstein and Don K. Nakayama, “Kocher and the Humanitarian Origin of Wound Ballistics”, *American College of Surgeons Poster Competition*, American College of Surgeons, 2017, p. 61, available at: [www.facs.org/-/media/files/archives/shg-poster/2017/09\\_kocher\\_wound\\_ballistics.ashx](http://www.facs.org/-/media/files/archives/shg-poster/2017/09_kocher_wound_ballistics.ashx); Susanne Kuss, *German Colonial Wars and the Context of Military Violence*, Harvard University Press, Cambridge, MA, and London, 2017, p. 112.

86 “Surgeon-General Dr von Bardeleben on the New Rifle Projectiles”, *British Medical Journal*, 21 May 1892, p. 1103; “Weapons and Wounds”, above note 34, p. 132; “The Wounds Produced by the Männlicher Bullet”, *British Medical Journal*, 20 January 1894, pp. 152–153.

87 “Surgeon-General Dr von Bardeleben”, p. 1103; “The Surgical Effects of Rifle Bullets”, *British Medical Journal*, 13 April 1895, p. 827; C. T. Dent, above note 70, p. 1211; Vincent J. Cirillo, *Bullets and Bacilli: The Spanish-American War and Military Medicine*, Rutgers University Press, New Brunswick, NJ, 1999, p. 49. Cf. Paul Joseph Dougherty and M. A. J. Herbert Collins, “Wound Ballistics: Minié vs. Full-Metal Jacketed Bullets—a Comparison of Civil War and Spanish-American War Firearms”, *Military Medicine*, Vol. 174, No. 4, 2009; L. A. la Garde, above note 36, p. 42.

88 *Ellesmere Guardian*, 2 October 1897, p. 3.

89 For more on the racialization of non-Europeans and justification of violence in Anglo-European law, see Elizabeth Kolsky, “The Colonial Rule of Law and the Legal Regime of Exception: Frontier ‘Fanaticism’ and State Violence in British India”, *American Historical Review*, Vol. 120, No. 4, 2015, esp. pp. 1221–1224.

justifying British soldiers' use of the dum-dum.<sup>90</sup> Medical officers further noted that indigenous healing techniques handled the Mark II wounds so well that the injured recovered within weeks.<sup>91</sup> One doctor even exclaimed that

there can be little doubt that from a humanitarian point of view the Lee Metford rifle is a perfect weapon. The bullet obviously inflicts very little damage on soft tissues and on bones its action is apparently not very severe .... I infer that the Lee-Metford rifle is an excellent weapon in every respect but one, that is, *will it stop a rush?*<sup>92</sup>

Similarly, during the Jameson raid conducted by the British against white Afrikaners in the Transvaal in 1895, troops used both the Martini-Henry rifle with its soft-lead bullets and the Lee-Metford gun shooting Mark IIs. The medical officers in attendance subsequently reported that the Mark II ammunition created wounds that were “much cleaner and healed more quickly than those produced by other methods”. In contrast, the Martini-Henry wounds were “larger, jagged, slow-healing”. They concluded that “the general consensus of opinion among those who saw the effects of the fighting in South Africa, is that the Lee Metford rifle or carbine is inferior to the Martini as a ‘man-slaying’ weapon”.<sup>93</sup> If “man-slaying” was needed, the Mark II would not deliver.

In so many ways, then, the dum-dum represented a return to earlier (more expansive) formats of rifle bullets – those which were more likely to guarantee a deadly result. And for some medical experts, at least, the shift back was essential. The US surgeon major-general John B. Hamilton, for example, felt compelled to defend the dum-dum bullet in a revealing commentary published in the *British Medical Journal* in 1898. Hamilton's lengthy article argued that the dum-dum bullet was less destructive than the Snider-Enfield cartridge (first used in the 1860s), whose “‘smashing’ powers were so great that it was adopted for sporting purposes”. He went on to explain that on “soft-bodied animals, such as tigers and panthers, its effects were wonderful, the biggest tiger often dropping dead to a single shot when well placed”. Hamilton further noted that while explosive bullets were made illegal in military settings in 1868, he nevertheless enjoyed their “most deadly” effects on game: “I shot a great deal of heavy game with it in India, and never lost an animal I knew I had struck.” Accordingly, since “savages” were “like the tiger” and less “susceptible to injury” than “civilised” men, and since they “will go on fighting even when desperately wounded”, Hamilton had no problems with Europeans using “man-stopping” bullets in warfare conducted

90 J. B. Hamilton, “The Evolution of the Dum-Dum Bullet”, *British Medical Journal*, 14 May 1898, p. 1251; *Auckland Star*, 20 July 1898, p. 3.

91 “Trials with the .303-inch Lee-Metford Bullet”, from the Superintendent of Small Arms Factory Dum Dum to Inspector-Gen. Ordnance, Bengal Command, 3 September 1895, in *East India (Military Bullet) Reports on the Effect of Military Bullet Now in Use in India*, HMSO, London, 1899, p. 17.

92 Jay Gould, “Observations on the Action of the Lee Metford Bullet on Bone and Soft Tissues in the Human Body: Made during the Chitral Expedition”, *British Medical Journal*, 20 July 1895, pp. 129–130 (emphasis added).

93 “The Lee Metford Rifle”, *British Medical Journal*, 4 April 1896, p. 865.

against those whom he considered less-than-human enemies.<sup>94</sup> A kill placed any man *hors de combat* too.

For the British Ordnance Department, the limitations of the Mark II, which wounded but failed to easily kill the enemy, needed rectification. Ordnance staff conducted experiments with .303-inch ammunition both in Britain at Hythe, Woolwich and Dungeness and at the Dum Dum Arsenal in India, where Bertie-Clay was given the honour of producing the moulds for what was identified as Mark II\* ammunition.<sup>95</sup> As some commentators complained with vitriol, there was very little new about Bertie-Clay's dum-dum design. They had certainly been hunting with such bullets for years!<sup>96</sup>

The Mark II\* dum-dum bullet and the newly designed Mark IV and Mark V expanding bullets were highly effective at "stopping" their victims, so much so that when Pathan troops captured stocks of dum-dums at the Battle of Tirah, they used them with equally deadly effect on British troops.<sup>97</sup> It is highly significant, then, that the Ordnance Department adopted the Mark IV ammunition for all service rifles late in 1897.<sup>98</sup> The British aimed to employ these bullets against all their enemies, be they colonial or European.

But when the media furore around dum-dum bullets broke soon after, this universally destructive ambition left the British government facing a political quagmire. Editorials across the Anglo-European world lambasted the "regressive" British for their uncivilized adoption of this military technology. Even a highly conservative military commentator in the Netherlands considered dum-dum wounds "horrifying" (*gruwelijk*) and used the most lurid description to make a case for their prohibition: "skin, soft tissues and bones were rent asunder across an extensive area, shredded and splintered, while whole pieces were lacerated off, so that limbs were often only connected together by strips of skin or singular tendons". The author hoped that the Hague Conference would resolve that this "most inhumane bullet" should never be used in European warfare. "Civilized" men, in his opinion, deserved to be kept alive and not suffering from needlessly cruel wounds.<sup>99</sup>

Before the Hague Conference, Britain's official response to these critiques was to stress that its expanding ammunitions were not exploding bullets (and so the terms of the St Petersburg Declaration did not apply) and, furthermore, that they were no more destructive than existing rifle rounds. English commentators

94 J. B. Hamilton, above note 90, p. 1251.

95 *Report of the Small-Arms Penetration Committee 1893 and 1894*, War Office, London, 1894, and *Department Committee on Small Arms: Various Reports*, HMSO, London, 1900, p. 39, both in Ordnance Department, *Small Arms Penetration Committee: Report*, Supp. 5, No. 919, National Archives, London; *East India (Military Bullet) Reports*, above note 91, p. 8.

96 "The Dum-Dum Bullet", *Friend of India* (Calcutta), 3 February 1898, p. 20.

97 T. R. Moreman, *The Army in India and the Development of Frontier Warfare 1849–1947*, Palgrave Macmillan, Houndsmills, 1998, p. 79.

98 *War in South Africa: Military Preparations: Report of the Royal (Elgin) Commission*, Cd. 1789-92 IOR/PARL/21318, Part 1, 1903, p. 86, in *Nineteenth Century Collections Online*.

99 "Engels Vernuft en Geweerprojectielen", *Militaire Spectator*, No. 68, 1899, p. 526.

tended to find these rationales more convincing than foreign ones.<sup>100</sup> By and large, outside Britain, the only rationale deemed appropriate for employing expanding bullets was a racist one. *Scientific American* certainly minced few words on the matter in August 1899: “When dealing with a fanatic like the Soudanese, a war of extermination must be carried on, and the Dum-dum bullet seems to be the most effective [weapon].”<sup>101</sup> The *Wichita Daily Eagle* promoted a similar message a year earlier:

Dum-dum bullets are especially designed for the use against savages. ... In civilized warfare all that is desired is to put a man out of the game by disabling him, which one ordinary bullet will accomplish, but the superior endurance of the savage has necessitated the use of a projectile that will kill him. In other words, he has to be dum-dummed.<sup>102</sup>

It is important to stress that after the signing of the Hague Conventions in August 1899, dum-dums and other expanding bullets were more roundly (although by no means universally) criticized, including in Britain and the United States. While there were commentators who continued to argue for the necessity of employing expanding bullets in imperial settings, in general, the Hague law ensured that most contemporaries publicly acknowledged “dum-dumming” as an abhorrent act regardless of who was being targeted or who was doing the shooting. Even the previously pro-dum-dum *Daily Mail* turned into a critic of the ammunition after 1899.<sup>103</sup>

The fact that the British military authorities continued not only to use but also to produce expanding bullets after 1899 is, therefore, telling. They did not much care for this Hague regulation. At any rate, since Britain did not sign up to the Hague Declaration until 1907, its military leadership did not feel compelled to adhere to the Declaration’s terms. Yet they also acknowledged that the political fallout around the use of expanding bullets required careful stage-managing in the public sphere. Hence, the British government recalled all Mark IVs from South Africa, and demanded that British troops only employ the defective Mark II bullets.<sup>104</sup> Britain’s ordnance factories reverted to manufacturing Mark IIs for the duration of the Anglo-Boer War.

In the meantime, the Army Board, Admiralty and Ordnance Department debated with the Cabinet about what ammunition to stock in future. The military preferred the newly designed hollow-nosed Mark V. The Cabinet implemented a compromise: for the foreseeable future, the military would employ both Mark V

100 See, for example, M. C. O’Connell, *Report on Effect of Military Bullet in Use in India*, House of Commons, CH Microfiche 105.573, in *UK Parliamentary Papers*, Vol. 65, 1899; “Wounds by Small Projectiles”, *Hospital* (London), 21 May 1898, p. 29; Alex Ogston, “The Effects of the Dum-Dum Bullet from a Surgical Point of View”, *British Medical Journal*, 28 May 1898, p. 1425; J. B. Hamilton, “The Dum-Dum Bullet”, *British Medical Journal*, 11 June 1898, p. 1559; Alex Ogston, “The Peace Conference and the Dum-Dum Bullet”, *British Medical Journal*, 29 July 1899, pp. 278–281.

101 “The English Mark IV Cordite Ammunition”, *Scientific American*, Vol. 81, No. 8, 1899, p. 122.

102 *Wichita Daily Eagle*, 16 July 1898, p. 4.

103 M. Abbenhuis, above note 6, pp. 109–111.

104 *War in South Africa*, above note 98, pp. 63, 87.

and Mark II bullets.<sup>105</sup> The Mark II would be “used wherever there is no risk of attack from savages”, although in an emergency any available ammunition (expanding or not) would do.<sup>106</sup> India could keep manufacturing and employing dum-dum bullets,<sup>107</sup> for as a War Office memorandum on the subject acknowledged in December 1899, in the wake of The Hague, “it is better to have Mark II for civilised and some form of expanding bullet for savage warfare than to make Mark V the universal pattern”.<sup>108</sup> To further hide its use of expanding bullets, in all settings, the government employed euphemistic terms like “ordinary” or “standard-issue” ammunition in its public documents,<sup>109</sup> as these politicians certainly wished to avoid another public relations crisis.<sup>110</sup>

## Conclusion

The prohibition of expanding bullets at The Hague in 1899 was easily achieved. It also offered an expedient “success” story for conference organizers to promote, which was particularly important given that most of the other arms control negotiations at The Hague firstly stalled and then failed.<sup>111</sup> At any rate, as many of the delegates thought, given that expanding bullets were only employed by the British, the British would bear the brunt of their prohibition. In this they were proven quite wrong, for much like the St Petersburg Declaration of 1868, The Hague’s dum-dum prohibition solidified the expectation that certain forms of military harm should be proscribed, particularly when less deadly or destructive alternatives were available. That norm infiltrated the global media sphere in the aftermath of the 1899 Hague Conference and continues to have enormous relevance in international humanitarian law and how we perceive the limits of warfare and State violence today.

There is no doubt that The Hague’s dum-dum prohibition forced the British State to carefully manage the propaganda around its use of expanding rifle ammunition after 1899 in imperial and non-imperial settings. In managing these public relations campaigns, it was not alone. Most of the wars of the early

105 Confidential Cabinet Paper, 8 December 1899, in “MS Joseph Chamberlain Papers Relating to Africa JC12/3/1-62”, in *Nineteenth Century Collections Online*.

106 Colonial Office Minutes, 29 March 1900, in War Office, “General and Warlike Stores: Ammunition (Code 45(C)): Future Pattern of Ammunition to be Used in .303 LM Rifle. Future Stocks to Be Held. Military Authorities at Home or Abroad to Use Discretion as to Use”, WO 32/7059, National Archives, London; Defence Committee, Memorandum, 19 January 1900, in Public Record Office, “Major General Sir John Charles Ardagh: Papers: Peace Conference at The Hague May–July 1899”, PRO 30/40/14, National Archives, London (PRO 30/40/14).

107 S.R.H. Knox, War Office Announcement, 3 March 1900, in WO 32/7058, above note 29.

108 Minute by Mr Wyndham, 1 December 1899, in “MS Joseph Chamberlain Papers Relating to Africa JC12/3/1-62”, in *Nineteenth Century Collections Online*. See also Minute by Secretary of State for War for Cabinet, 8 December 1899, in PRO 30/40/14, above note 106.

109 Director Inspector General of Ordnance, 3 March 1900, in WO 32/7058, above note 29.

110 For more, see Maartje Abbenhuis, “The Dum-Dum Controversy: Rifle Ammunition in British Politics at the Turn of the Twentieth Century”, forthcoming, 2023.

111 Cf. S. A. Keefer, above note 15.

twentieth century, including the First World War, were beset with dubious claims and counter-claims of illegal dum-dum use. Still, it is also true that some of the worst instances of State violence committed during the twentieth century, much like those of the nineteenth, involved expanding ammunitions. It is important to recognize that these acts were not only committed by the British.<sup>112</sup> Expanding bullets remain in use today, including in police actions; you can buy blue-nosed expanding bullets in any hunting shop. It is also true that turning a full-metal-jacket bullet into an expanding one is rather simple: all that is needed is to file away its tip or insert cross-cuts.<sup>113</sup>

Whenever they are used, however, expanding bullets occasion controversy, in part because of the existence of the Hague law but also because they do enormous harm – they are “man-slayers”, after all. And perhaps that is the dum-dum’s most enduring legacy: the trope of the “barbarous dum-dum” is more evocative than effective in restraining the hounds of war and State violence.

112 There is definitely more work needed on the actual use of expanding ammunition in military and non-military settings after 1899.

113 Cf L. J. Ramsey, “Bullet Wounds and X-Rays in Britain’s Little Wars”, *Journal of the Society of Army Historical Research*, Vol. 60, No. 242, 1982, p. 93.