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# Gas Disarmament in the 1920s: Hopes Confounded

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**ABSTRACT** Following the extensive use of chemical weapons in the First World War, which contravened pre-war agreements, gas disarmament was a prime candidate for interwar consideration. Although the issue remained on the international agenda until the ill-fated World Disarmament Conference, this paper argues that it failed on account of military, economic and political difficulties. These included the continuing interest of the military in the potential of chemical weaponry, doubts about the practicality of gas disarmament at a time when states were trying to revive their chemical industries, and profound political differences over security issues between Britain and France and France and Germany.

**KEY WORDS:** chemical warfare, gas disarmament

*The Times* described the first major use of poison gas on the Western Front (Ypres, 22 April 1915) as an ‘atrocious method of warfare’ that would ‘fill all races with a new horror of the German name’.<sup>1</sup> Branded as inhumane by allied propaganda, chemical warfare acquired an odious reputation during the First World War that would be depicted vividly in the works of wartime novelists, poets and artists.<sup>2</sup> Even the Allied and Associate Powers, when pressed by the International Committee of the Red Cross to renounce chemical warfare, deplored these ‘barbarous methods of refined cruelty’ in March 1918, and characterized the war gases as ‘dastardly abominations’ without being

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<sup>1</sup>*The Times*, 29 April 1915, 9.

<sup>2</sup>On propaganda, see Horace C. Peterson, *Propaganda for War* (Norman, OK: University of Oklahoma Press 1968), 63; and James M. Read, *Atrocity Propaganda 1914–1919* (New Haven, CT: Yale UP 1941), 195–9. On the works of Sir Arthur Conan Doyle, Wilfred Owen and John Singer Sergeant, see Edward M. Spiers, ‘Chemical Warfare in the First World War’, in British Commission for Military History (ed.), *‘Look to Your Front’: Studies in the First World War* (Staplehurst: Spellmount 1999), 163–78.

willing to abandon the option of retaliation-in-kind.<sup>3</sup> Poison gas was a prime candidate for post-war disarmament partly on account of its wartime image and partly on account of its fearsome potential, whether in the development of new gases or its use in aerial attacks upon civilian communities. Yet those who advocated gas disarmament had to overcome the continuing interest of the military in the refinement and potential of chemical warfare, the intrinsic difficulties of gas disarmament, the gradual discrediting of the disarmament process as a whole, and, ultimately, the revived usage of chemical warfare as a military option.

Superficially the prospects for gas disarmament seemed promising. Poison gas had been the subject of pre-war proscription. At the Hague Peace Conference on 29 July 1899, the contracting powers, including Great Britain, had agreed 'to abstain from the use of projectiles the sole object of which is the diffusion of asphyxiating or deleterious gases', and Article 23 of the Land War Convention (agreed at the Hague in 1907) had forbidden the use of 'poison or poisoned weapons' and any 'arms, projectiles or material calculated to cause unnecessary suffering'.<sup>4</sup> Restoring the ban on chemical warfare upheld wartime protestations that Germany had broken international agreements. It also reflected broader hopes that disarmament would reduce the costs and burdens of war, not least for Britain. It was thought that disarmament would ease relations between states, thereby obviating future arms races and curtailing the prospect of another war that might prove a 'nightmare of scientific invention', with the gas bombing and spraying of civilian populations.<sup>5</sup> None of these ideas impressed Britain's general staff, which reminded the British delegation at the Paris Peace Conference that the Hague declarations had failed in the past and that gas had become a 'standardized weapon, not a mere possibility'. Having reviewed all the advantages of retaining gas warfare from a British perspective, it affirmed that 'no nation can take the risk of abandoning it [gas

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<sup>3</sup>[Kew, The National Archives], CAB[inet papers] 4/15, CID [Committee of Imperial Defence] paper 732-B, 'International Condemnations of Gas', 21 Oct. 1926.

<sup>4</sup>Ibid.

<sup>5</sup>Ibid.; Anne Orde, *Great Britain and International Security 1920–1926* (London: Royal Historical Society 1978), 2; Dick Richardson, *The Evolution of British Disarmament Policy in the 1920s* (London: St Martin's Press 1989), 3; Lorna S. Jaffe, *The Decision to Disarm Germany: British Policy towards Postwar German Disarmament, 1914–1919* (London: Allen and Unwin 1985), 159–60; and John J. Underwood, 'The Roots and Reality of British Disarmament Policy 1932–34' (Ph.D. diss., University of Leeds 1977), 22.

warfare] without the absolute certainty – which will be impossible to attain – that it will never be used by an adversary'.<sup>6</sup>

Britain, nonetheless, was determined to disarm Germany – a policy, as Lorna Jaffe argues, that was neither a war aim nor a derivative from the concern about Prussian militarism, but a political policy determined largely by the Prime Minister, David Lloyd George. By establishing German disarmament as a precursor to general disarmament, he wished to co-opt French and American support and hoped to persuade France to cease demanding the detachment of the Rhineland and a long-term commitment from Britain to uphold continental security. He regarded the reductions in the size of the German army and German armaments (as a former minister of munitions, Lloyd George appreciated the importance of matériel in the winning of the war) as merely preliminary measures. Subsequent progress towards general disarmament would help to destroy militarism throughout Europe, enhance the preservation of peace and enable Britain to concentrate on her domestic problems. Given the coincidence between this approach and Point Four of President Woodrow Wilson's Fourteen Points, Britain and the United States defined the purpose of German disarmament not as a means of curbing German power but as a means of 'render[ing] possible the initiation of a general limitation of the armaments of all nations...' (preamble to Part V of the Treaty of Versailles). In effect, Lloyd George envisaged the creation of a democratic Germany as a bulwark against Bolshevism and a state that would support disarmament as consistent with its democratic principles.<sup>7</sup> Accordingly, Article 171 of the treaty declared:

The use of asphyxiating, poisonous or other gases and all analogous liquids, materials or devices being prohibited, their manufacture and importation are strictly forbidden in Germany.<sup>8</sup>

Whether Britain was now, in the wake of the Paris Peace Conference, 'psychologically, morally and legally committed to disarmament'<sup>9</sup> is possibly moot. The War Cabinet had already received evidence about the intrinsic difficulty of undertaking gas disarmament and had been pressed by the War Office to resume the use of poison gas. At the beginning of 1919, a mission, headed by Brigadier H. Hartley – then

<sup>6</sup>[Kew, The National Archives], WO 32/5190, Sir A. Lynden Bell to Sir C.H. Harington, 25 Mar. 1919, including 'Note by the General Staff on the Use of Gas'.

<sup>7</sup>Jaffe, *Decision to Disarm Germany*, 159–64, 169–73, 185–8, 202–3, 214–8.

<sup>8</sup>PP [Parliamentary Papers], 'Treaty of Peace between the Allied and Associated Powers and Germany, Signed at Versailles, 28th June 1919', Cmd 153 (1919), LIII, 221, 225.

<sup>9</sup>David J. Shorney, 'Britain and Disarmament 1916–1931' (Ph.D. diss., University of Durham 1980), 13.

controller of the Chemical Warfare Department of the Ministry of Munitions – had inspected German gas factories in the Occupied Zone. It found considerable evidence of dual-capable processes. Just as many of the gases employed in the war (such as chlorine, phosgene and hydrogen cyanide) had perfectly legitimate civilian purposes, so ‘the bulk of the plant employed for the production of poison gas had been in existence prior to the war for the manufacture of dye stuffs or pharmaceutical products’. Even the manufacture of thiodiglycol, the key precursor in the production of mustard gas, the so-called ‘king of the war gases’, was ‘carried out entirely at Ludwigshafen, where plant was in operation prior to the war for the preparation of ethylene and ethylene chlorhydrin [*sic*]’. The mission also revealed that the factories of the IG (*Interessen Gemeinschaft*) combination had ‘great military value’ as these could be ‘rapidly converted to war purposes, thanks to highly-trained personnel and the great technical resources of their peace organization’. These factories had expanded significantly during the war to meet the demand for poison gas, so leaving ‘a greater productive capacity than it had before the war’. Gas disarmament, as the mission recognized, faced an insuperable problem, as any treaty that allowed Germany to retain a dye industry for civilian purposes left her with a capacity to reconstitute a chemical warfare programme in time of war. It concluded prudently that:

as long as Germany maintains her dye industry she will be in a position to make poison gas should she so desire. Our only safeguard lies in the establishment of a strong dye and fine chemical industry in this country so that, if necessary, we would be prepared to retaliate-in-kind.<sup>10</sup>

More immediately, the War Office requested permission to resume the use of gas in post-war operations and to sustain research and development facilities at Porton Down. Militarily, Britain faced vast additional responsibilities after the collapse of the German and Ottoman empires in Africa and the Middle East, huge pressures for demobilization, and an upsurge of fighting on the north-west frontier. Accordingly, Winston Churchill, as Secretary of State for War and Air, recommended that Britain should use all her technological assets, including gas where appropriate, to police the empire.<sup>11</sup> The War

<sup>10</sup>WO 33/987B, ‘First Report of... the CWC [Chemical Warfare Committee] for the period ending 31 March 1921’, 24–5.

<sup>11</sup>Edward M. Spiers, ‘Gas and the North-West Frontier’, *Journal of Strategic Studies*, 6/4(1983), 94–112; CAB 24/106, W.S. Churchill, ‘Mesopotamian Expenditure’, 1 May 1920, C.P. 1320.

Office found itself thwarted initially in India, where political and moral concerns were uppermost after the Amritsar massacre, but had the support of an independent committee under Lieutenant-General Sir A. E. Holland for the creation of a comprehensive research and development organization, covering all aspects of chemical warfare, at Porton Down. The armed services were also allowed to experiment with the first air-delivered chemical weapons, the 'M' devices, discharging irritant agents in the allied intervention operations in northern Russia (September 1919).<sup>12</sup> On 16 October 1919, the War Cabinet resolved that, as no other 'military power' had indicated that it would desist from 'preparations for the employment of asphyxiating gases in warfare', the War Office 'should continue its gas organisation, without denouncing the Land War Convention and the Declaration of 1907, so far as these tie our hands in the matter of gas'.<sup>13</sup>

Gas disarmament, though, intruded in future debates, both within the cabinet and internationally. As the War Office sought permission to undertake vivisection experiments at Porton, and then for funding that would attract and retain the services of 'scientists of any value', debates erupted over the priorities of British policy. The general staff, supported by the Admiralty, argued that gas could not be disinvented as a weapon, and that it would restore Britain's 'technical superiority' over frontier tribes armed with quick-firing guns, rifles and machine guns. They claimed, too, that gas research and development was being sustained in France and the United States, and that gas, despite its odious reputation, was a relatively humane weapon which caused a far smaller proportion of fatalities than high-explosive weapons.<sup>14</sup> Their opponents included Edwin S. Montague, the Secretary of State for India, who reiterated his opposition to any 'unprovoked use' of gas in India. He argued that gas was militarily unnecessary and likely to prove counterproductive, lowering 'our moral prestige both in India and on the frontier', especially after 'our violent denunciations of its use by the Germans'.<sup>15</sup> H. A. L. Fisher, the president of the Board of Education, also maintained that the government had to take account of public opinion: 'the British public thought that poison gas was a low game and they think so still'. He claimed that the government should endeavour to persuade other powers, either by direct negotiation or through the

<sup>12</sup>WO 33/987B, 'First report of the CWC', 8; and WO 106/1148, Major-General E. Ironside to General Rawlinson, 16 Sept. 1919, enclosing reports on the 'M' bombs.

<sup>13</sup>CAB 23/12, Cabinet conclusions, 16 Oct. 1919.

<sup>14</sup>CAB 24/105, H. Wilson, memorandum, 16 April 1920, enclosed in W.S. Churchill, 'Gas Warfare', 3 May 1920, C.P. 1211; see also Earl Beatty, 'Gas Warfare', 7 May 1920, C.P. 1246.

<sup>15</sup>CAB 24/105, E.S. Montague, memorandum, 12 May 1920, C.P. 1278.

Council of the League of Nations, to desist from the use of gas warfare or at least to 'suspend further development of it'. Countering arguments about the relative humanity of chemical warfare, he insisted that 'more painful' gases could be developed and that the 'evils' of this form of combat could be enhanced by the bombing of civilians with gases or germs (i.e., biological warfare). While he accepted that gas disarmament might fail, he felt nonetheless that every effort should be made to follow up Britain's commitments under the Treaty of Versailles:

I do not think that we should be hurried by our Naval and Military Advisers into a precipitate acceptance of innovations which we have more than once condemned, which we have forbidden the Germans, which are repugnant to the great mass of our people, and which are easily capable of developments from which the imagination recoils.<sup>16</sup>

The cabinet composed the internal debate by referring the matter to the League of Nations, which had a remit on account of Article 8 of its Covenant to 'formulate plans' for 'the reduction of national armaments to the lowest point consistent with national safety'.<sup>17</sup> The cabinet required Arthur Balfour, its representative on the Council of the League, to indicate that this 'new method of warfare' should not have been employed, that Britain would 'rejoice to see it stopped', and that Britain hoped that the League could discover 'an effective means' to put 'an end to such warfare'. On the other hand, if the ban were not universal, Britain, in self-defence, would be bound to keep abreast of other nations in research and development to defend its soldiers and to be able to undertake reprisals. Meanwhile it authorized the War Office to continue its research and development at Porton Down 'on the narrowest scale and in the most unobtrusive manner'.<sup>18</sup>

The League's Council meeting in Rome on 19 May 1920 established a Permanent Advisory Commission for Military, Naval and Air Questions (PAC), composed of service delegates, to advise on military, naval and air questions generally and on disarmament in particular. Balfour duly submitted a questionnaire to PAC inquiring whether gas was a fundamentally cruel weapon, whether limits could be placed on the quantity of gas employed in war, whether it would be possible to

<sup>16</sup>CAB 24/106, H. Fisher, 'Gas Warfare: memorandum by the President of the Board of Education', 17 May 1920, C.P. 1301.

<sup>17</sup>George Scott, *The Rise and Fall of the League of Nations* (London: Hutchinson 1973), 410.

<sup>18</sup>CAB 23/20 and CAB 23/21, Cabinet conclusions, 4 Mar. 1920 and 12 May 1920; see also CAB 24/105, M.P.A. Hankey, 'Gas Warfare', 4 May 1920, C.P. 1218.



prohibit laboratory experiments or prevent commercial factories from producing gases for military purposes, and whether PAC could advise the Council on international regulations concerning chemical warfare.<sup>19</sup> On 22 October 1920, the commission replied to the first three questions but disdained to answer the final inquiry as it was beyond its competence as a 'purely technical Commission'. It advised that the employment of gas warfare was 'fundamentally cruel... but not more so than certain other methods', although any use against non-combatants would be 'regarded as barbarous and inexcusable'. However, the commission resolved that it would be 'useless' to try to restrict the use of gas in war or to limit the manufacture of gases in peacetime. 'The prohibition of laboratory experiments', it added, 'is out of the question'.<sup>20</sup>

Gas disarmament would still be pursued outside the League, most notably at the Washington Conference, convened by the United States in November 1921. By comparison with the preparations for the 1919 Paris Peace Conference, British preparations for this conference, primarily about naval arms control, have been described as 'barely rudimentary'.<sup>21</sup> The cabinet took advice from a standing subcommittee of the Committee of Imperial Defence (CID). It recommended that 'all attempts to raise, at the Washington Conference, the question of the regulation or limitation of methods of warfare should be resisted'. Previous disarmament efforts, it added, had not only failed 'under the test of war' but had also handicapped 'law-abiding and peaceful nations' while giving 'an initial advantage' to those who were willing to contravene accepted regulations. In any case, it feared that an investigation of such questions risked prolonging the conference indefinitely.<sup>22</sup> The cabinet agreed that the British Empire delegation should adopt the report as a 'general guide'.<sup>23</sup>

If the British Empire delegation, headed by Balfour, found the United States extremely well prepared for this conference,<sup>24</sup> they soon took comfort from the deliberations of the poison gas subcommittee. Once again a committee of technical specialists from the five principal powers

<sup>19</sup>CAB 24/115, 'Report of the Permanent Advisory Commission for Military Naval and Air Questions to the Council of the League of Nations', 22 Oct. 1920, C.P. 2177.

<sup>20</sup>Ibid.

<sup>21</sup>Erik Goldstein and John Maurer (eds), *The Washington Conference, 1921-22: Naval Rivalry, East Asian Stability and the Road to Pearl Harbor* (London: Frank Cass 1994), 23.

<sup>22</sup>CAB 4/7, CID Paper 280-B, Standing Sub-Committee, 'The Washington Conference on Limitation of Armaments', 24 Oct. 1921.

<sup>23</sup>CAB 23/27, Cabinet conclusions, 1 Nov. 1921.

<sup>24</sup>Goldstein and Maurer, *Washington Conference*, 27.

could not see any method by which chemicals could be limited in use, or their research prohibited, or the production of such gases banned. It doubted whether specific war gases could be constrained without the imposition of limitations on peacetime industries, such as the dye industry. Even worse, as any international agreement could be nullified by an unscrupulous power in time of war, no country could take the risk of being 'found unprepared' to meet this threat.<sup>25</sup> However, another committee, composed of public officials and private citizens, including General John J. Pershing, took a contrary view in advising the American delegation. Claiming to represent the 'conscience of the American people', it recommended the total abolition of chemical warfare and its classification with other unfair methods of warfare, such as the poisoning of wells and the spreading of disease. A third report from General Board of the US Navy asserted that gas warfare infringed two fundamental principles of war, namely that unnecessary suffering should be avoided and that innocent non-combatants should not be destroyed.<sup>26</sup>

Setting aside the advice of the technical subcommittee, Elihu Root on behalf of the US delegation gave notice on 6 January 1922 of a formal resolution condemning gas warfare. In advising Lloyd George of this proposal, Balfour, who had hoped to avoid the issue, suspected that it had been 'rather hastily adopted'. Technically, he feared that no international ruling could prevent a chemical plant, erected in peacetime, from being converted to manufacture poison gas in war, that nothing could prevent the discovery of new gases, that no country could rely on all other states honouring an international agreement, and that Britain would have to take 'the same precautionary measures' whether the conference condemned gas warfare or not. He recognized, nonetheless, that the American proposal was more or less in line with previous principles adumbrated in the pre-war Hague declarations and in Article 171 of the Treaty of Versailles. Practically, he doubted whether Britain could be seen to reject a proposal 'supported by this weight of authority' and clearly favoured by public opinion in the United States and the dominions. As he observed:

If British delegation were to resist on some technical grounds a policy which, on every other ground they would like to see made effective, their position will be hopeless. They will be charged with

<sup>25</sup>[Kew, The National Archives], FO[reign Office records] 371/7245, A.J. Balfour to D. Lloyd George, 22 Dec. 1921; and WO 188/144, British Empire Delegation, 'Report of Committee with Respect to Poison Gas', 22 Dec. 1921.

<sup>26</sup>*Conference on the Limitation of Armament, Washington November 12, 1921–February 6, 1922* report of American Delegation (Washington DC 1922), 730, 732, 734, 736.

appealing to sentiments of humanity when it suits them – as it does in the case of submarines – and being indifferent or hostile when their interests are not specially concerned.

He consoled himself with the reflection that ‘Declarations solemnly condemning methods capable of grossest abuse may prove useful even if they cannot always be enforced; while their rejection will be certainly held to imply indifference, if not approval’.<sup>27</sup>

On the following day, Albert Sarraut of France professed unreserved adherence to the US proposal but referred to the difficulties involved in any regulation of gas manufacture. Balfour also endorsed the proposal but reaffirmed that states could not ignore previous infractions of international agreements, and that they would have to take precautions against any future violation by an ‘unscrupulous enemy’.<sup>28</sup> The British Empire duly joined France, Italy and Japan in approving the US resolution that became embodied as Article V of the Washington Treaty:

The use in war of asphyxiating, poisonous or other gases, and all analogous liquids, materials or devices, having been justly condemned by the general opinion of the civilized world and a prohibition of such use having been declared in treaties to which a majority of the civilized powers are parties,

The Signatory Powers, to the end that this prohibition shall be universally accepted as a part of international law binding alike the conscience and practice of nations, declare their assent to such prohibition, agree to be bound thereby as between themselves and invite all other civilized nations to adhere thereto.<sup>29</sup>

At first glance the disarmament clauses of the Washington Treaty seemed another step forward in the cause of gas disarmament. Unlike the post-war peace treaties they were not imposed on defeated countries. As measures freely agreed by the great powers, and supposedly of universal application, the US Senate ratified them on 29 March 1922, so constituting the first American endorsement of an international ruling on chemical warfare. But the treaty proved an utter failure. It never came into force because France failed to ratify it on account of the submarine clauses. Article V, moreover, completely ignored the technical tasks of monitoring, verifying and enforcing any

<sup>27</sup>FO 371/7245, Balfour to Lloyd George, 7 Jan. 1922, telegram no.233.

<sup>28</sup>FO 371/7245, Balfour to Lloyd George, 7 Jan. 1922, telegram no.235.

<sup>29</sup>FRUS [*Papers Relating to the Foreign Relations of the United States*] (Washington: US Government Printing Office 1992) Vol.1, 269.

international agreement. By ignoring the technical reservations of the poison gas subcommittee, its language ‘never strayed beyond pious platitudes’.<sup>30</sup> Even worse, the references to the ‘general opinion of the civilized world’ raised expectations, in the heady atmosphere of the early 1920s, that poison gas would not be used again in war.

Sir Robert Horne, the Chancellor of the Exchequer, seized upon Article V – even before it had been ratified by all the signatory powers – to argue against expenditure on ‘a constantly developing service [at Porton] without any limit of time’. He maintained that Britain’s retention of a research and development centre would compel other states to follow suit as defensive research ‘must involve a certain amount of offensive experiment’. He urged that Britain should try to persuade other states to close their ‘lethal gas researches and offer to do the same ourselves’, and in the meantime that Porton should not be allowed to expand.<sup>31</sup> The assistant chief of the naval staff, Rear Admiral Chatfield, a member of the British delegation at the Washington Conference, had anticipated such a reaction and attempted to forestall it. He had advised that the Root proposal should have been amended to allow the signatory powers to undertake chemical warfare research but Balfour overruled him.<sup>32</sup> So the Admiralty and War Office led the opposition against the Treasury’s proposal. In addition to the customary arguments against gas disarmament, they maintained that neither Germany nor the Soviet Union was bound by the Washington agreement, and that it would be folly to wait until another war erupted before resuming the development and production of anti-gas equipment.<sup>33</sup> On 28 July 1922, the standing defence subcommittee of the CID reviewed the arguments of the Treasury and the service departments, with Churchill, as Secretary of State for the Colonies, insisting that it would be most unwise to abandon research in this ‘vital form of warfare’. The committee strongly deprecated the abandonment of research on gas warfare, and agreed that Porton should continue its research and experimentation on the scale currently sanctioned.<sup>34</sup>

<sup>30</sup>Edward M. Spiers, *Chemical Warfare* (Basingstoke: Macmillan 1986), 43.

<sup>31</sup>CAB 24/137, ‘Gas Warfare: Memorandum by the Chancellor of the Exchequer’, 22 June 1922, C.P. 4054.

<sup>32</sup>[Kew, The National Archives], ADM[iralty papers] 1/8621/40, Rear Admiral A.E. Chatfield, minute, 28 June 1922.

<sup>33</sup>CAB 4/8, CID Paper 355-B, ‘Gas Warfare. Memorandum by the Naval Staff’, 17 July 1922; and CID Paper 361-B, ‘Gas Warfare. Memorandum by the Secretary of State for War’, 27 July 1922.

<sup>34</sup>WO 188/212, ‘A Summary of Important Notes and Papers in connection with the policy of gas warfare in order of dates from 1899’; and CAB 2/3, 161st meeting of the CID, 28 July 1922.

Residual hopes for gas disarmament now centred upon the League of Nations, where Lord Robert Cecil, then representing South Africa and the *rapporteur* to the Third Committee of the Second League Assembly, kept pressing for new initiatives. Disappointed with the performance of the PAC,<sup>35</sup> Cecil proposed that the Temporary Mixed Commission for the Reduction of Armaments (TMC) should consider whether scientists could be persuaded to make their research public in the hope of deterring nations from using gas in war. The TMC duly referred this suggestion to a Committee on Intellectual Co-operation, but the latter reported that the proposal was impractical.<sup>36</sup> Nevertheless the TMC, in response to another proposal by Cecil, appointed a special subcommittee, comprising eight scientists, physiologists and bacteriologists, to report on the results of the manufacture and use of new methods of war. The committee had access to the findings of the technical committee that reported to the Washington Conference and studied a wide range of gases and their effects. It reported in the autumn of 1924, testifying to the formidable power of poison gas, the advantage which its usage would confer upon any power with hostile intentions, and the ease with which gas production could be camouflaged. It emphasized that powers possessing such weapons might choose to use them against civilians as well as against troops, and hence that 'all nations should realise to the full the terrible nature of the danger which threatens them'. As a consequence, it drew attention to 'the vital danger to which a nation would expose itself if it were lulled into security by over confidence in international treaties and conventions'.<sup>37</sup> In effect, another specialist committee had doused the hopes of the disarmers, confirming the inherent difficulties of implementing an effective ban on the research, development, production and use of poison gas.

In the absence of any progress on gas disarmament, the great powers sustained their chemical warfare programmes. Britain built steadily on the consensus secured by the CID's deliberations in July 1922, which the Treasury belatedly accepted on condition that Porton should operate over the next three years within the estimates of £237,000 set for 1922–23. Its work was to focus on defensive measures but could include offensive research and development to ensure that the protective measures were adequate.<sup>38</sup> As in other areas of land warfare, Britain could claim a degree of unilateral disarmament having disposed

<sup>35</sup>FO 371/7062, 'Verbatim Record of the 6th Plenary Meeting of the Second League Assembly', 8 Sept. 1921.

<sup>36</sup>ADM 116/2142, 'Report of the TMC [Temporary Mixed Commission]', 7 Sept. 1922.

<sup>37</sup>WO 188/144, 'Report of the TMC', 30 July 1924.

<sup>38</sup>WO 33/1028, 'Third Report... of the CWC', 1923, 15.

of all stocks of gas shell and other offensive gas appliances after the Washington resolution in 1922.<sup>39</sup> On 23 February 1924, Lord Cavan, then Chief of the Imperial General Staff, urged the Labour government to review Britain's chemical warfare policy. He feared that Britain was falling behind other powers in research and training and noted that Germany had refused to surrender gas masks to the Commission of Control.<sup>40</sup> After extensive deliberations, the CID prepared a policy document that was endorsed by the next Conservative cabinet on 18 February 1925. It stipulated that service schools and commands should study how gas could be used offensively, and that personnel should train so that they could perform all their service duties 'by day and night while protected against gas'. It also adopted the diplomatic formula of France, whereby on the outbreak of war, and in agreement with its allies, the government would ask an enemy government whether it would agree not to use gas as a weapon of war. If this agreement was not forthcoming, the government reserved the right 'to act according to circumstances'. It agreed, too, that should the necessity arise, bulk production of gas could be resumed and stocks of gas accumulated.<sup>41</sup>

Pressed by the armed services on matters of gas policy, the British government was most unlikely to take any initiatives on gas disarmament. Indeed, the more radical disarmament proposals, such as those of Major Victor Lefebure, who wrote a history of the gas war and several papers on gas disarmament, ran entirely contrary to British policy. Lefebure realized that gas warfare would remain a possibility so long as the chemical industry, especially the German dye conglomerates, was left unregulated. He proposed that Germany should lose her organic chemical monopoly with industries redistributed to other countries and placed under international supervision and inspection under the authority of the League of Nations.<sup>42</sup> However logical as a proposal, its implementation would have undermined the sovereignty and economic recovery of the Weimar Republic. As a consequence, it would have thwarted the aim of successive British governments to bolster an independent, democratic German state, one willing to ratify

<sup>39</sup>WO 33/1049, 'Fourth Report of the CWC', 1924, 16.

<sup>40</sup>CAB 4/11, CID Paper 483-B, 'Chemical Warfare Policy', 23 Feb. 1924.

<sup>41</sup>CAB 23/49, Cabinet conclusions, 18 Feb. 1925.

<sup>42</sup>Major Victor Lefebure, *The Riddle of the Rhine: Chemical Strategy in Peace and War* (New York: The Chemical Foundation 1920), 244–5, 260–3; id., 'Chemical Warfare: The Possibility of its Control', *Transactions of the Grotius Society*, Vol.7: Problems of Peace and War Papers Read Before the Society in the Year 1921, 153–66; and id., 'Chemical Disarmament', *National Review* 78 (September 1921–February 1922), 51–9. For an endorsement of Lefebure's vision, see Philip J. Noel Baker, *Disarmament* (London: Hogarth Press 1926) Ch.14.

its western borders in the Treaties of Locarno (1925) and enter the League of Nations (1926).

The Fifth Assembly of the League of Nations, though, was willing to act on the warnings of the TMC's report of 30 July 1924. It referred these findings to the forthcoming conference on the 'Control of the International Trade in Arms, Munitions and Implements of War' which convened in Geneva on 4 May 1925. At its first meeting, held on 7 May, Theodore E. Burton, the US representative, seized the initiative. Acting on the wishes of President Calvin Coolidge, he submitted a draft convention that virtually reproduced the wording of the Washington Treaty but added that the conference should prohibit the export of asphyxiating, poisonous or other gases and analogous liquids intended or designed for use in war.<sup>43</sup> Although most countries applauded these sentiments, some representatives noted immediately that this proposal, if implemented, would simply preserve the existing inequalities between gas-producing and non-producing countries. Others wanted the means of defence against chemical attack to be excluded from the resolution, while the Polish representative sought an extension of the proposal to include bacteriological as well as chemical warfare.<sup>44</sup>

The American 'scoop', as described by Sir Eric Drummond, the League's secretary-general,<sup>45</sup> provoked fierce opposition from the Board of Trade. It referred to the serious damage that would be done to Britain's export trade in chemicals in view of the vast number of chemical substances involved and the dual-use nature of many of the gases.<sup>46</sup> The Admiralty and War Office advised that Britain could accept a restatement of the 'Root Treaty' but not any interference with industrial activities or trade within the Empire, and that any prohibition should lapse if a belligerent used gas in war.<sup>47</sup> The Foreign Office followed this advice, particularly the admonitions of the Board of Trade, and readily accepted the findings of the technical committee of the conference that the trade in dual-use chemicals could not be regulated, and that any ban could not prevent states from producing chemical weapons.<sup>48</sup>

<sup>43</sup>FO 371/11033, Lord Onslow, 7 May 1925, telegram no.93.

<sup>44</sup>FO 371/11033, League of Nations, 'Conference for the Control of the International Trade in Arms, Munitions and Implements of War. Verbatim Report of First Meeting of the General Committee (7 May 1925)', 7–9.

<sup>45</sup>FO 371/11033, Western department minutes, 20 May 1925.

<sup>46</sup>FO 371/11033, H. Fountain to Under-Secretary of State for Foreign Affairs, 13 May 1926.

<sup>47</sup>FO 371/11033, Admiralty minute, 21 May 1925.

<sup>48</sup>FO 371/11033, Foreign Office to Fountain, 22 May 1925 and Lord Onslow, 26 May 1925, telegram no. 146. See also 'Arms Conference for Outlawing Gas', *New York Times*, 6 June 1925, 1.

Once again technical advice had thwarted the hopes raised by an American initiative, but Burton still sought the adoption of a general declaration banning the use of gas in war. After an emotional debate on the horrors of gas warfare, the delegates agreed that:

Whereas the use of asphyxiating, poisonous or other gases, and of all analogous liquids, materials or devices, has been justly condemned by the general opinion of the civilized world; and...the prohibition of such use...shall be universally accepted as part of International Law, binding alike the conscience and the practice of nations...[and shall] extend this prohibition to the use of bacteriological methods of warfare, and agree to be bound as between themselves according to the terms of this declaration.<sup>49</sup>

Forty-four states, including the United States, France, Germany, Poland, Italy, Japan and the British Empire, signed the Geneva Protocol. As the sole international ruling on gas warfare in the interwar years, it reproduced the injunctions of the Washington Treaty, extended to cover bacteriological as well as chemical weapons. It neither contained any measures of verification nor sanctions in the event of non-compliance nor did it apply to wars with non-signatories. It also had to be ratified, with a clear initiative expected from the US. However, when Senator William E. Borah, chairman of the Foreign Relations Committee, urged the Senate to give its 'advice and consent', he encountered massive opposition organized by Lieutenant-Colonel Amos A. Fries, head of the Chemical Warfare Service. Fries had briefed key Senators, including James W. Wadsworth, on the relative humanity of gas warfare and deluged senators with telegrams denouncing the protocol from the American Legion, Veterans of Foreign Wars, the Association of Medical Surgeons and the American Chemical Society. So effective was the lobby that Borah withdrew the treaty, which would not be ratified by the United States Senate until 1975.<sup>50</sup>

Japan followed the American example and refused to ratify the protocol while other states carefully considered their positions. Of the major powers, France ratified in 1926 with Italy and the Soviet Union following suit two years later. However, it was not until Germany ratified in 1929 that Britain announced that it would do so. The protocol, though technically leaving British chemical warfare policy

<sup>49</sup>CAB 4/15, CID Paper 732-B, 'International Condemnations of Gas', 21 Oct. 1926.

<sup>50</sup>United States Senate, *Congressional Record*, 69th Congress, 2nd Session, 9 Dec. 1926 (LCVIII), 140–55, 226–9, 363–8.



unaffected,<sup>51</sup> had caused an immense debate within the British government. It had split service opinion, with the Admiralty favouring immediate ratification while the War Office and Air Ministry counselled delay.<sup>52</sup> It aroused further concerns as intelligence indicated that Russia, in expanding her gas-production capacity, was constructing a large factory capable of producing mustard gas at Samara, within reach of the Afghan border. Lord Birkenhead, now at the India Office, opposed any regulation that would prevent India from retaliating with gas against external attack or of using gas from aeroplanes against rebellious tribesmen. The governor of Southern Rhodesia also sought permission to use gas to quell native rebellions.<sup>53</sup>

Sir Austen Chamberlain, the Foreign Secretary, adamantly opposed the first use of gas by British forces or any campaign justifying chemical warfare. He reminded the CID that 'We had repeatedly condemned gas in the strongest language' and described the wartime usage of Germany 'as a barbarous act and as an outrage to civilisation'. He insisted that any treaties against gas only applied in warfare with enemies who had ratified those treaties and that British commitments would cease if these pledges were 'dishonoured'. Chamberlain accepted that Britain must persist with its existing policy – that is, being prepared to produce gas and to protect the armed forces against it. Meanwhile Britain should neither press other nations to ratify the protocol nor ratify it until other powers had done so. In short, he recommended that Britain should adopt a 'neutral attitude' towards the protocol, advice that the cabinet would endorse.<sup>54</sup>

This approach fell far short of gas disarmament. When Britain eventually ratified the Geneva Protocol on 9 April 1930, she emulated France and Russia in adding two reservations: first, the commitment only applied vis-à-vis other states that had ratified the protocol; and second, this commitment would cease should any enemy fail to respect the protocol.<sup>55</sup> In effect, British policy, as sustained under Conservative and Labour governments, simply regarded the protocol as a ban on the

<sup>51</sup>WO 33/1128, 'Sixth Annual Report of the CWC', 31 Mar. 1926, 19.

<sup>52</sup>CAB 4/15, CID Paper 707-B, 'Letter from the Admiralty to the Secretary, Committee of Imperial Defence', 20 July 1926; CID Papers 709-B and 723-B, 'Chemical Warfare Policy' memoranda by the Secretary of State for War, 29 July 1926 and 8 Oct. 1926; and CID Paper 726-B, 'Chemical Warfare Policy: Note by the Air Staff', 15 Oct. 1926.

<sup>53</sup>CAB 2/4, 217th meeting of the CID, 11 Nov. 1926; CAB 4/16, CID Paper 754-B, 'Chemical Warfare Activities in U.S.S.R', 20 Dec. 1926; and CAB 2/5, 226th meeting of the CID, 5 May 1927.

<sup>54</sup>CAB 2/4, 217th meeting of the CID, 11 Nov. 1926; CAB 2/5, 221st meeting of the CID, 25 Feb. 1927; and CAB 23/54, Cabinet conclusions, 3 Mar. 1927.

<sup>55</sup>US Arms Control and Disarmament Agency, *Arms Control and Disarmament Agreements: Texts and History of Negotiations* (Washington, DC 1977), 9–17.

first use of chemical and bacteriological weapons and reserved the right to retaliate in kind.

Lord Cecil, who served in both governments and acted as president of the League of Nations Union from 1923 to 1945, remained wholeheartedly committed to gas disarmament. As he informed the cabinet on 7 March 1927, the reduction and limitation of armaments was 'essential for the safety of European civilisation and the existence of the British Empire'. He feared that the 'air bombardment of London by explosives, incendiary substance and poison gas' would prove a 'fearful menace for which there is no defence other than the threat of similar bombardment abroad'.<sup>56</sup> Cecil was not a complete idealist; he accepted technical advice, agreeing that the conversion of chemical factories to wartime production could not be prevented, and doubted that civilians could be protected from gas sprayed from aircraft. He recognized, too, that any ban on gas warfare would need sanctions in the event of non-compliance, and so advocated international retaliation with gas against any state that used gas in war. Although Cecil realized that neither Britain nor the United States were willing to make such a commitment, he insisted that the abolition of gas warfare would remain on the agenda of the Preparatory Disarmament Commission (the PDC, a body that replaced the PAC and TMC in December 1925).<sup>57</sup>

The 25-member PDC took four years to prepare a draft agreement on disarmament, a paralysis largely attributable to the Anglo-French disagreement. Fuelled by the differing perspectives of a maritime and a land power, Britain and France differed fundamentally in their attitudes towards disarmament and security. While Britain felt fundamentally secure and presented its post-war demobilization as an act of unilateral disarmament, France sought new provisions for supervision and sanctions in any agreement before she reduced her military advantage over Germany. This fundamental divergence over security remained unresolved.<sup>58</sup>

<sup>56</sup>CAB 24/185, R. Cecil, 'Reduction and Limitation of Armaments', 7 Mar. 1927. See also Viscount Cecil, *The Great Experiment: An Autobiography* (London: Jonathan Cape 1941), 183; and Richardson, *Evolution of British Disarmament Policy*, 24–5.

<sup>57</sup>CAB 2/4, 217th meeting of the CID, 11 Nov. 1926. See also P. Towle, 'British Security and Disarmament Policy in Europe in the 1920s', in R. Ahmann, A.M. Birke and M. Howard (eds), *The Quest for Stability: Problems of West European Security 1918–1957* (London: The German Historical Institute and Oxford UP 1993), 127–53, especially 143.

<sup>58</sup>Andrew Webster, 'An Argument without End: Britain, France and the Disarmament Process, 1925–34', in Martin S. Alexander and William J. Philpott (eds), *Anglo-French Defence Relations between the Wars* (Basingstoke: Palgrave Macmillan 2002), 49–71; and Maurice Vaisse, 'Security and Disarmament: Problems in the Development of the Disarmament Debates 1919–1934', in Ahmann *et al.*, *Quest for Stability*, 173–200, especially 179–81.

It found reflection in differing responses to the German infractions of the disarmament clauses of the Treaty of Versailles. Whereas France saw these violations as covert rearmament, Britain lacked the troops to enforce compliance and successive foreign secretaries wanted to restore Germany as a stable state in Europe. They overlooked what they regarded as technical violations of the treaty,<sup>59</sup> which in respect of chemical warfare went far beyond the refusal to surrender gas masks to the Control Commission. Under the Treaty of Rapallo (1922), Germany assisted the Soviets in the construction of gas factories, the conduct of gas experiments, the testing of materials and the training of German officers in these new facilities.<sup>60</sup> Conservative and Labour governments were much more concerned to sustain the good relations between Britain, France and Germany in the late 1920s, symbolized by the so-called 'spirit of Locarno'. Both refused to develop plans for the defence of the civil population against gas attack, arguing that Germany must be recognized as a 'friendly government now... a government of good faith and good will' and a government that would ratify the Geneva Protocol.<sup>61</sup>

Disarmament, nonetheless, failed to prosper partly because fundamental security issues divided France and Germany and Britain and France, partly because the post-war trend towards democracy began to recede (with dictatorships emerging in Japan and Italy and extreme nationalist parties gaining ground in Germany), and partly because the World Disarmament Conference was convened too late and in highly inauspicious circumstances. Overshadowed by the Manchurian crisis, the conference only began on 6 February 1932 after the Labour government had fallen from office, and so Arthur Henderson assumed the presidency of the conference when he was neither Foreign Secretary nor even a Member of Parliament. Cecil delivered an opening address not as a British delegate but as president of the World Federation of League of Nations Societies. He advocated the reduction of armaments to the minimum needed for national defence and the abolition of all weapons that would assist the offensive, including poison gas. There were endorsements of these principles in the opening speech of Sir John Simon, the new Foreign Secretary, and later in the disarmament plan

<sup>59</sup>Jaffe, *Decision to Disarm Germany*, 216–7; Towle, 'British Security and Disarmament Policy'; and Vaisse, 'Security and Disarmament', 145, 189.

<sup>60</sup>Hans W. Gatzke, 'Russo-German Military Collaboration During the Weimar Republic', *The American Historical Review* 63/3 (1958), 565–97.

<sup>61</sup>*House of Lords*, Fifth Series, Vol.71 (11 July 1928), cols.980–2; *Parliamentary Debates*, Fifth Series, Vol.229 (9 July 1929), col.683.

which President Herbert Hoover, who was facing an imminent election campaign, laid before the conference.<sup>62</sup>

Once the plenary sessions convened, all the familiar difficulties resurfaced, with disagreements over how to implement, verify and enforce any universal ban on chemical weapons. Representatives argued over the peacetime manufacture and preparation of toxic gases, the disposal of stocks of weapons, peacetime training, the right to retaliate-in-kind and sanctions. Underpinning these technical disputes were the political disagreements that turned the conference into a 'trial of strength' between Germany and France.<sup>63</sup> While Germany insisted upon equality of treatment on this issue, as others, France would not countenance an agreement without 'extended supervision' and sanctions. Neither Britain nor the United States would oblige. As Henry L. Stimson, the US Secretary of State, advised his delegation in Geneva:

although public opinion in this country would align itself against the violator of the chemical warfare treaty, I do not think it possible for this Government to pledge itself to affirmative action...I am strongly of the opinion that the simpler the treaty, the easier will be its acceptance; similarly, the more it depends on the good faith of its signatories, the better will be the chances of its observance.<sup>64</sup>

Similarly, when Britain submitted its Draft Disarmament Convention to the conference on 16 March 1933, it proved distinctly limited in scope. It recommended that a Permanent Disarmament Commission should investigate reported violations of a ban on chemical warfare but failed to explain what should follow a confirmed violation.<sup>65</sup>

None of these ideas were adopted as Germany withdrew from the conference in October 1933 and announced its decision to leave the League of Nations. Although the conference staggered on into 1934, it was effectively moribund. The last embers of gas disarmament were

<sup>62</sup>Vaisse, 'Security and Disarmament', 183-7; Philip Noel-Baker, *The First World Disarmament Conference 1932-33 and Why it Failed* (Oxford: Pergamon Press 1979), 72, 74-8, 81-2; FO 411/15 no.6, 'Sir J. Simon's Speech at the Disarmament Conference', 8 Feb. 1932; and *FRUS* (1932) Vol.1, H. Hoover, 'Disarmament Plan', 22 June 1932, 179-82.

<sup>63</sup>*FRUS* (1932) Vol.1, H. Gibson, telegram, 10 May 1932, Wilson to Stimson, 21 Sept. 1932 and Stimson to Wilson, 8 Nov. 1932, 120-1, 333, 366-7; and Vaisse, 'Security and Disarmament', 188-9.

<sup>64</sup>*FRUS* (1932) Vol.1, Stimson to Wilson, 12 Nov. 1932, 376-7.

<sup>65</sup>CAB 24/239, 'Draft Disarmament Convention submitted to Geneva', 16 Mar. 1933, 16-19.

extinguished by the revelations of gas bombing and spraying by the Regia Aeronautica in the Italo-Ethiopian War (1935–36). Rearmament now seemed imminent as Prime Minister Stanley Baldwin asked the crucial question: ‘if a Great European nation, in spite of having given its signature to the Geneva protocol against the use of such gases, employs them in Africa, what guarantee have we that they may not be used in Europe?’<sup>66</sup>

Chemical rearmament would ensue albeit slowly, and in competition for scarce resources with conventional rearmament, as Britain came to reply upon civil defence (with a nation-wide distribution of gas masks) and the deterrent threat of a retaliation-in-kind. The hopes for gas disarmament had foundered not only on the technical difficulties of the task and the desire of the armed services to prepare for chemical warfare but also on the political and economic priorities of the 1920s. As countries were unwilling to constrain their peacetime manufacture and trade in chemicals, and neither Britain nor the US was prepared to give the requisite security guarantees, gas disarmament was doomed.

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<sup>66</sup>*The Times*, 20 April 1936, 8.

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