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Political Decisions and Britain’s Chemical Warfare Challenge in World War I: Descend to Atrocities?

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The Germans introduced poison gas to the world at the Second Battle of Ypres in Belgium on 22 April 1915, and Britain responded with outrage. The enemy had started a form of warfare that the Army was not prepared to combat; the military had no masks, no gas canisters, no policy with regard to chemicals, and no one who could use the new weapon. The country was morally repulsed and militarily vulnerable.

Responding was a challenge, but a straightforward one that could be overcome. The government would need to harness scientists, industry, and the military to develop defensive and offensive tools to combat and use gas. Within months, the Army possessed efficient masks, ones that were constantly improved to increase protection against novel gases. The labs produced a range of chemicals, from simple chlorine to sophisticated mustard gas, as the war continued. With time, industry learned to manufacture these products and the Army began to use them effectively. After the first wave of anti-gas helmets had been created and distributed to troops (by the end of April public volunteers had fulfilled the War Office’s request with simple masks, and by 6 July all soldiers had received more sophisticated hypo helmets), the problem British politicians faced was not about the country’s ability to wage chemical warfare. It was whether it should do so offensively.

As World War I developed, it became clear that the conflict would require novel kinds of warfare, ones that dismayed, disgusted, and disillusioned people prepared to fight a romantic, quick war. Soldier-poet Wilfred Owen’s cynicism about ‘pro patria mori est’ provides vivid evidence of this; his experiences in the trenches proved it was not sweet and proper to die for one’s country. The enormous numbers of casualties, the unbearable

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shelling, and, of course, the poison gas, were all examples of the new, brutal war.

Perhaps it should not have been difficult to accept methods of fighting that were so psychologically fearsome and physically destructive. After all, machine guns, wire entanglements, and trench warfare, signs that warfare was growing in scale and intensity, had been present in the American Civil War and the Russo-Japanese War. Despite this, the early twentieth century was a period in which Europeans believed that they enjoyed a superior level of civilization compared to that outside the industrialized world. They even believed themselves able to restrict some of the inhumane elements of war through international treaties, such as the ones signed at The Hague in 1899 and 1907. Thus it became increasingly burdensome that World War I intensified in brutality and demanded that belligerents on both sides engage in atrocious behavior. What would it say about civilized British society, if and when the country had to adopt the new and barbarous elements of war?

While this was a dilemma that all of Britain had to consider, consciously or not, it was the politicians who had the responsibility for adopting wartime policies that required Britain to utilize and confront barbaric methods. As they did so, they balanced on a fine line; using every tool at their disposal, such as gas, might be barbaric and help lessen Britain’s status as a civilized nation in her own and in global eyes, but failing to wield every possible tool might cost Britain victory. The fact that the main foe, Germany, had already been labeled as barbaric, or without kultur, for invading Belgium conducting submarine warfare, and now using chemicals meant that Britain might find a similar fate if she, too, adopted the new weapon. Also, Britain could be seen as hypocritical if she used gas herself after condemning Germany vociferously for doing just that.

In the end, with regard to gas, British politicians adopted the new methods of war, but did so reluctantly. During World War I the British government made a series of decisions regarding gas, taking into account military desires, but always maintaining ultimate control over chemical warfare policy. The first assessment was whether to use gas offensively; defensive activities were clearly justified on the grounds of self-protection.

Next, once the government gave approval for gas attacks, it confronted the issue of escalation. Should Britain introduce more sophisticated chemicals on the battlefronts? The story of gas was one of tit-for-tat; one side developed a new chemical and the other then produced and used it, too. Meanwhile, each side improved the design of its respirators to withstand the new threats. The cycle continued. Chemicals fell into groups, though,
from lachrymatory ones; namely, tear gases, to fatal mixtures. These toxins could produce different types of symptoms, from suffocation to burning. They reached enemy lines via various delivery systems, such as shells or cloud cylinders. Changing from one category of gas to another altered the tenor of the gas war more than switching from one poison to another. Britain had to consider whether she wanted the responsibility for shifting the gas war to a new phase.

After that, a third question arose when Britain had to decide whether to introduce the new weapon into other theaters, spreading the gas war beyond the Western Front. In these instances, the politicians maintained their preferences for limiting the expansion of the gas war, but they used discouragement more than outright bans when conveying this to local commanders, implicitly acknowledging their on-the-spot expertise with the situation on the ground.

The final dilemma was whether to stop the chemical war before the end of the larger conflict in response to a multinational International Red Cross appeal in 1918, a request whose existence foreshadowed the post-war efforts to prohibit future gas use.

Britain helped shape the framework of chemical warfare during its inaugural conflict. She worked hard to keep up with German advances in gas weaponry and tactics, and thus not to give her enemy too great an advantage with them. Britain responded to escalations in the gas war; she did not cause them. By limiting the expansion of chemical warfare, the politicians tried to protect both Britain’s fighting ability as well as her reputation and status. Thus, she appeared to be a reluctant gas warrior, when, in reality, she was simply a cautious one. She could limit her vulnerability while not appearing aggressive.

The Advent of the Gas War

At first glance, it seems that if the Germans introduced a new weapon, the only questions Britain might have had about adopting it were whether she could produce and deploy it and whether it was a sufficiently effective tool to bother to do so. When the enemy targeted the French 45th Algerian Division’s lines on 22 April 1915 on the first day of the gas war, the Allied colonial troops ran. In fact, it has been recognized that the Germans could have broken through the opposing lines if they had had enough faith in gas to arrange for reinforcements who could follow up on the advantage the chemicals produced. Gas appeared to be a miracle weapon at this point, capable of breaking the stalemate on the Western Front. Two days later, the Canadians proved that troops could withstand gas, even without sophisticated
anti-gas helmets, although at a great cost in lives. While there was no way of knowing whether the Germans would use gas again, the general assumption was that they would, and thus Britain needed to start an anti-gas helmet industry as well as institute military training to respond to the threat.

In addition, Britain considered trying the new armament herself. Gas was a prohibited weapon, though, according to the Hague Conferences of 1899 and 1907. The former outlawed arms whose main role was to deploy asphyxiating gases. The latter banned tools of war that produced unnecessary cruelty as well as poisoned armaments, which would seem to include chemical weapons. Rationally, the slow suffocation of soldiers that resulted from the chlorine gas used in April violated the agreement. The Germans knew this; they had signed both treaties. Still, they openly acknowledged the possibility that they might have employed gas, as The Times quickly publicized in its translations of articles from the Kreuz Zeitung: ‘it is even probable that missiles which emit poisonous gases have actually been used by us…’ Later the Germans admitted it clearly. They defended themselves largely on two grounds, one based on the language of the 1899 Hague documents and the other resting on claims of the right of retaliation. The Germans did not address the less specific 1907 Convention; perhaps the terms of the treaty were too vague to use as the basis of a strong argument.

The first line of reasoning focused on the letter, not the spirit, of the law. This technique was reminiscent of Germany’s defense against charges of human rights violations in Belgium. She had argued that she was well within her rights to shoot franc-tireurs, or partisans, because they ‘did not carry weapons openly, nor did they conform to the laws and usages of war’ as the Hague Conventions of 1907 required legitimate popular resisters to do. This could have been a successful argument in a court of law, but it did not win over world public opinion, particularly when Britain focused on the inhumanity – not the legality – of her foe’s actions.

A similar result occurred after Edith Cavell’s execution in October 1915. The British nurse had aided the enemy and abandoned neutrality; German officials technically could arrest and execute her, and in fact they did. It looked inhumane in the world’s eyes, though, to shoot a female nurse in the face of civilization’s general taboos against harming women and nurturers.

With regard to gas, Germany could argue that the Hague Declaration of 1899 banned ‘projectiles’ whose ‘sole object’ was to deploy gas [my italics]. The treaties had used that terminology because high explosives often released small amounts of toxic fumes simply because of the way they functioned. Releasing gas as an unintentional, small side-effect was quite different from doing it deliberately to choke soldiers. Germany would have
had a hard time proving that she was innocent of breaking the international
government on that point.

She could point out, though, that she had not violated the terms of the
agreement because the Army had used cylinders, like helium tanks, to
release the chemicals. It was true that she had not used the mechanism
specifically mentioned in the law: projectiles. At that point, chemical
warfare technology relied upon canisters to release gas. Soldiers connected
cylinders of gas with pipes and buried them near the front line. At the
appointed time, they turned valves to release the gas. This rudimentary
system relied upon the wind to carry the chemicals to the enemy. While it
could produce a wide and deep cloud of gas, how quickly it blew over (and
away from) the foe was at the mercy of the wind. (Later in the war, both
sides adopted gas shells that could drop the toxins directly into the midst of
the enemy; the cost was a weaker concentration of the poison though.)
Germany had obeyed the letter of the law, but not its spirit.

The idea of chemical warfare had had a long life by the end of the nine-
teenth century.\textsuperscript{14} Some scholars suggest that the rudiments, or at least the
forerunner, of chemical warfare began in ancient times when warriors
would use smoke to dislodge the enemy or would contaminate wells with
dead bodies. The Crimean War provoked one of the first suggestions for a
recognizable, true chemical weapon. Lord Dundonald of Britain, a famous
admiral in the Royal Navy, proposed that his country develop and use gas.
The war was not progressing smoothly, and a new weapon might provide
the impetus for a rapid and victorious end to the conflict. His superiors’
reaction was an immediate and strong no.\textsuperscript{15}

Before the Germans introduced gas in 1915, the British had discussed
and experimented in the laboratory with chemicals, but did so within the
boundaries of The Hague treaties as they understood them. For example,
they concentrated on lachrymatory substances such as ethyl iodoacetate
(more informally called ‘SK’ after the South Kensington location of the
laboratory).\textsuperscript{16} These weapons were truly in the nature of an investigation; no
plans for using them existed before the Germans attacked at Ypres in
April 1915.

Gas, associated with poison, treachery, and killing at a distance, violated
the norms of gentlemanly warfare, particularly the old-fashioned ones of
fighting face-to-face and one-on-one with steel as much as possible.\textsuperscript{17} In
addition, the nature of chemical weapons was so different from that of
tangible bullets and swords that it was a target of suspicion by the military.\textsuperscript{18}
The fact that gas was related to poison, traditionally a ‘dishonourable and
unsportmanslike’ weapon, added to this.\textsuperscript{19} Instinctively it sounded dreadful,
too; it worked by inhibiting normal breathing, one of humanity’s most basic
functions. Like drowning, it conjured up horrible images. It was clear why
the signatories of the prohibition of gas in 1899 never wanted to see gas
released on a battlefield.

With such a strong dislike of gas among the international community,
why did the Hague Declaration of 1899 fail to outlaw chemical cylinders as
well as shells? Because gas had never been used, it was unclear exactly how
a chemical weapon would work. The best that the diplomats could do was
to envision an existing weapon modified to deploy gas; they tried to put gas
into their conceptual framework of weapons. Shells were a sophisticated,
modern armament, and negotiators probably imagined that a dedicated
scientist or soldier could turn a shell into a conveyor of gas. The terms of
The Hague treaty was never intended to outlaw only the distribution of gas
specifically from shells, but of gas weapons. The German argument exoner-
ating their use of cylinders instead of shells, therefore, seems rather weak.
H. J. Tennant, under-secretary of state at the War Office, confirmed this
official interpretation in the House of Commons. On 18 May 1915, he
proclaimed that ‘obviously the diffusion of the gases was the object of the
prohibition rather than the means by which they were diffused’.20

There was another prong to Germany’s justification for releasing chlo-
rine at Ypres in April 1915. She claimed the right of retaliation against
earlier French and British gas use.21 It is possible that some French soldiers,
with or without official sanction, experimented with the riot gas that their
police force used against criminals. However, if that did occur, it was
isolated, small-scale, and irritating – not lethal – in nature.22 In addition, the
British never used gas, although they had wondered why Germany had
published accusations against them in the weeks before 22 April. As The
South Wales Argus noted on 24 April 1915, ‘The false statement made by the
Germans a week ago, to the effect that we were using such gases, is now
explained. It was obviously an effort to diminish neutral criticism in
advance.’23 As can been seen, Germany’s claims that she was retaliating were
also weak.

Some Britons felt anger that Germany had not only introduced gas, but
had broken the law, too. Lord Robert Cecil declaimed Germany’s several
violations of the laws of war, although ‘the most terrible is the barbarous use
of poisonous gases. I am quite certain no one would have thought that cred-
ible or possible six months ago.’24 For Britain, breaching laws was almost as
uncivilized as the new weapon. After all, she had joined the war partly to
uphold her treaty guaranteeing Belgian neutrality.

So, Britain felt justified in decrying Germany’s use of gas as illegal
although she, too, focused on the 1899 Convention and not the more vague
1907 treaty in her complaints. An occasional voice did question, if not
reject, this judgment, even in the Cabinet. As Prime Minister Herbert Asquith wrote to King George V about the meeting of 26 April 1915: ‘As the gases are apparently stored in and drawn from cylinders, and not “projectiles”, the employment of them is not perhaps an infraction of the literal terms of the Hague Convention.’ These doubts were few and far between however among the British population.

Deciding to Use Gas Offensively

The Germans released gas upon the world at Ypres, at 1730 on 22 April 1915. By 0948 the next morning, General Sir John French, the British Expeditionary Force (BEF) commander, sent a telegram to Field-Marshal Lord (Horatio) Kitchener, the Secretary of State for War, with the news that Britain’s allies had been devastated with a new weapon. He wired:

Germans used powerful asphyxiating gases very extensively in attack on French yesterday with serious effect…. Apparently these gases are either chlorine or bromine…. Will send further details later but meanwhile strongly urge that immediate steps be taken to supply similar means of most effective kind for use by our troops…. Also essential that our troops should be immediately provided with means of counteracting effects of enemy gases which should be suitable for use when on the move…. As a temporary measure am arranging for troops in trenches to be supplied with solutions of bicarbonate of soda in which to soak handkerchiefs.

The General clearly expressed ire and, more importantly, concern for the military implications of the new weapon. Britain’s troops had to be able to fight on equal ground; they needed poison gas, too. There was no hint that French felt he faced a dilemma about adopting a reviled and outlawed armament; the foe had crossed that line, and he saw no moral problems in following. His only interest lay in outfitting his soldiers such that they were not at a disadvantage. If gas was going to be used, as the Germans indicated, and if it was effective, as the attack suggested was possible, then the British could not afford militarily to eschew the new weapon. French’s needs were immediate and practical, unlike those of diplomats and politicians. He could not even take the time to worry about the impact chemicals would have on the tradition of the Army and of European fighting. The BEF’s commander had to respond to an immediate crisis.

His superior, Lord Kitchener, replied the next day. As the administrative leader of the British Empire’s war effort, a military man with an outstanding reputation, constantly conversing with professional politicians, and situated
safely in London at a geographical and temporal distance from the Western Front, Kitchener’s concerns differed from French’s:

The use of asphyxiating gases is as you are aware contrary to the rules and usages of war… . Before therefore we fall to the level of the degraded Germans I must submit the matter to the Government… . In the meantime I shall be glad if you would send me any example or diagnosis of the material used, and I am also having the matter fully gone into in our laboratories and by experts in this country… . These methods show to what depth of infamy our enemies will go in order to supplement their want of courage in facing our troops.

Kitchener’s response resembled a press release with its references to ‘degraded Germans’ and the ‘infamy’ of the foe’s actions. He also had the luxury of resources and time that French did not. He could think clearly about bringing the might of Britain’s scientific resources to bear in order to make the nation’s response as strong as possible. His primary remark addressed the legal implications of the Germans’ actions. In the first place, in his mind, the recent events were illegal; in the second place, they were beyond the pale of civilized behavior. He did not rule out the possibility of offensive reactions by the Army, but neither did he condone nor even refer to French’s request for it. Kitchener was in a position, close enough to the government, physically and with regard to his role in the war, to need to consider image as well as practicalities. In fact, the former concern seemed to have come first in his set of priorities.

However, Kitchener did not become the chief soldier of Britain without being realistic; he began planning for all contingencies. Almost immediately, the War Office requested respected scientist Dr John Scott Haldane to travel to the Western Front to investigate the situation. Soon afterwards, on 3 May 1915, Kitchener ordered the scientific bodies in the Trench Warfare Department under Colonel Louis Jackson to explore and develop the nation’s chemical warfare capabilities.

In the meantime, a public debate surrounding the introduction of gas, and the proper response by the Allies, trumpeted through the press. Arguments, such as this one made in a regular column of the Illustrated London News in June 1915, wrestled with the moral and practical issues that the leaders of the government considered behind closed doors:

Is it worth while to violate all the rules of civilised warfare hitherto observed for the sake of such puny results? [Gas up to now had not been that effective, although its potential was clear.] This point is of much importance in considering the question of reprisals… . Shells,
guns, rifles, and bayonets are what we really want to end the war.... To our soldiers, then, should be left, as it seems to the present writer, the task of requiring the use of weapons which they consider unfair, and some of which at least are a distinct contravention of the international agreements.\textsuperscript{32}

There were calls for British retaliation and retribution, and questions about potential policy regarding gas, but the government preferred to keep its adoption of these policies quiet.\textsuperscript{33} They were not absolutely secret, but they were not emphasized either. Better to appear slow in some eyes than to blatantly acknowledge that the country had embraced the very behavior she had condemned (and continued to decry) so publicly. In addition, it made sense to keep the Germans in the dark as long as possible about any British conclusion to use gas.

Finally, the government announced its decision, and participants in a post-war Cabinet meeting believed that ‘public opinion had compelled the Government to retaliate’.\textsuperscript{34} Popular pressure had a role, but so did more practical concerns. On 18 May Kitchener addressed the House of Lords, simultaneously condemning Germany for her premeditated surprise attack and announcing that:

\textbf{His Majesty’s Government, no less than the French Government, felt that our troops must be adequately protected by the employment of similar methods so as to remove the enormous and unjustifiable disadvantage which must exist for them if we take no steps to meet on his own ground the enemy who is responsible for the introduction of this pernicious practice.}\textsuperscript{35}

Britain therefore did not formulate her response to the German gas attacks blindly or hurriedly. When she decided to enter the offensive gas war, she did so after investigation and debate. She also noted the ethical and military choices that shaped her thinking; the government and many of the British people saw the issue in the same way.

These new steps to create gas weapons did not receive the same degree of press coverage that the enemy’s assault did. The press rarely mentioned offensive chemical action by Britain, whereas articles about defensive developments and references to Germany’s use of the new weaponry continued.\textsuperscript{36} The former allowed Britain to continue to portray herself to her citizens and to the world as brave and victimized without being weak. It also prevented any secrets about the Army’s new weapons from leaking to the enemy. Newspaper stories emphasized the enemy’s atrocities and the justness of the British fight.
When the press or other public mouthpieces referred to offensive gas use, such as in visual images, they often justified the actions in ways that would maintain Britain’s national image as a defender of the weak and of the law. As a belligerent exercising retribution or retaliation, she appeared almost biblical in her behavior. For example, Frank Holland published a cartoon in the popular magazine *John Bull* in which clouds labeled ‘Retaliation’ and ‘Poison Cloud’ descend upon German soldiers. The caption quotes Hosea 8: 7: ‘They have sown the wind, and they shall reap the whirlwind.’ Consider that she could merely have declared the Hague treaties void because the enemy broke the contract that bound Britain to avoid gas. She could also have claimed simply that Germany used it first and that she was only responding. Instead, Britain carefully maintained her image and her position as a civilized country as much as possible, although she did, in the end, choose the goal of victory over fear of barbaric action. She tried to protect her status, but she did not change all of her behavior to save it, particularly when the cost would have been so high.

The Second Decision: Escalation of Chemicals

Politicians’ dilemmas did not end with a simple decision to adopt gas as a weapon. They constantly had to make choices that balanced the nation’s image and its deeds. Would they be willing to risk world-wide condemnation by escalating the chemical war?

The use of poison gas was dynamic in many respects. Each side improved its defensive capabilities, including the gas alarms sounded in an attack, the chemical repertoire respirators defused, and anti-gas drills soldiers practiced. With regard to offensive aspects, the armies expanded the chemicals they used in order to penetrate the increasingly sophisticated helmets. For example, over time they switched from chlorine, a simple but fatal chemical, to mustard gas, a blistering, persistent agent that burned skin. Delivery systems also improved, progressing from cylinders that released a large cloud of gas that traveled according to the mercy of the winds to shells and grenades over which troops had more control when directing them at the enemy trenches.

Therefore, there was a distinction between responding to the enemy’s use of gas and expanding the scale of the chemical war either by kind of harm produced or type of deployment mechanism. The introduction of gas, in April 1915, especially because the chemical was deadly chlorine, was the largest innovation taken by either side. The Germans paid for their action with vociferous condemnation in the global press.
could be damaged almost as much by increasing the scope of the poison gas. If chlorine, which turned out to be rather easy to combat once Britain began to manufacture anti-gas masks, produced popular and political horror, what would occur when more sophisticated and diabolical chemical weaponry or tactics appeared? 39

Throughout the war, simply the notion that Germany might release gas or germs deliberately on London’s civilians, widening the gas battle by using airplanes and violating another traditional law of war by attacking noncombatants far from the battlefield, produced anxiety. 40 In response, Britain’s policy-makers in General Headquarters, the War Office, and the Ministry of Munitions, in conjunction with the French, explicitly stated that they would not use their aircraft to deliver gas, except in retaliation. 41 Britain struggled to maintain the high moral ground over the Central Powers despite her decision to adopt offensive strategies; that was difficult enough when she merely followed Germany’s lead. What would happen if she took the initiative now?

Britain therefore adopted a policy in which she would respond to, but not initiate, escalation. As one gas warrior, Charles Foulkes, stated, in 1915 Britain decided ‘to use gases which were as harmful, but not much more so, than those used by the enemy, though preparations and experiments might proceed for the employment of more deadly things’ [Foulkes’ emphasis]. 42 The British constantly experimented with and even developed new gases, but they did so to be able to anticipate German innovations and thus improve soldiers’ gas masks before the new poisons appeared on the field. They also wanted to be ready to use more unusual chemicals as soon as Germany produced them herself. Britain was willing neither to lose the chemical war, nor the entire conflict. She wanted to be able to respond and fight at each new level of warfare as soon as it developed. Her policy fulfilled these requirements; it allowed her to maintain her image as the reluctant gas warrior, a civilized nation that reluctantly engaged in the necessary atrocities of the war, while remaining ready for new levels of retaliation as they became necessary. The debate over the discovery and manufacture of jellite, a cyanide compound, illustrated this dilemma.

Scientists sitting on governmental bodies, such as the Scientific Advisory Committee of the Trench Warfare Department in the Ministry of Munitions, enjoyed almost complete autonomy in deciding which substances to explore for potential weapons and when to stop the investigative procedures. 43 Some substances were obvious choices for exploration; they were known to be toxic or plentiful, such as poison ivy. 44 One of these was prussic acid, also known as hydrocyanic acid. This compound contained cyanide, long recognized to be an almost instantaneously lethal
chemical. As a weapon, it formed the basis of jellite, vincennite, and similar gases, depending on the exact components of the compound.\textsuperscript{45}

Initially, there was resistance among the British decision-makers against utilizing this chemical, and not simply because of the horrible reputation prussic acid held even in comparison to other awful substances. The gas war had begun with the Germans releasing a fatal cylinder gas, chlorine, and the British responding. Shells, however, were projectiles specifically outlawed by The Hague Declaration of 1899, although they were more accurate than canisters. Using a new, more dreadful gas and deploying it as one of Britain’s first shell gases would be a serious escalation in the war, legally as well as militarily.

By 1916 intelligence learned of rumors that the Germans were considering using prussic acid.\textsuperscript{46} One of the most colorful stories was that an American professor in Switzerland heard the stories at an international academic meeting; dismayed, he passed on the news to a British chaplain who forwarded it to British officials.\textsuperscript{47} This inspired the British to conduct their own investigations so that they would be ready if Germany did use the poison.\textsuperscript{48} Soon reports of enemy activity went further, suggesting that Germany would actually use hydrocyanic acid, ‘particularly in the event of his line … being pierced’.\textsuperscript{49} Information indicated that industries were producing the supplies needed to support this policy and that other factories were filling shells and airplane bombs with it.\textsuperscript{50}

The rumors were effective and believable, but after the war it became clear that Germany had never used this poison.\textsuperscript{51} One reason may have been that she could not defend her own troops against it effectively.\textsuperscript{52}

On the offensive side, British scientists in the Admiralty and the Ministry of Munitions, those under the now Brigadier-General Jackson’s aegis, began to compare their experiments in March 1916. They explored different proportions of the compounds necessary to make prussic acid an effective weapon. The Army and the Navy both had considered the chemical in 1915, but only the former expressed long-term interest in using it.\textsuperscript{53} Added to these difficulties were the interservice rivalries between the Army and the Navy; the latter owned the plant that was equipped to make jellite, but would not give it to the Army.\textsuperscript{54}

Finally, production of jellite required cyanide, a chemical used to harvest the gold needed to run the British war effort. Diverting cyanide would have enormous repercussions, and thus the Bank of England and the Colonial Office became involved in discussions over jellite production.\textsuperscript{55} How much cyanide did the Army need? How valuable was it to the nation to have a certain amount of jellite at the cost of a particular amount of gold? At last, it became clear that the Treasury could spare some cyanide, enough
to make 20 tons a week of jellite, and this amount would not upset finances unduly.\textsuperscript{56}

Eventually the Scientific Advisory Committee recommended approval of jellite shells, their technical analysis having deemed them sufficiently effective and reliable.\textsuperscript{57} The choice, in the end, though, was not theirs. Even so, the Ministry of Munitions took steps to prepare for jellite production, including negotiating with the Navy for plant space, arranging supply priorities to include jellite, and establishing guarantees of delivery.\textsuperscript{58} In 1916 the military expressed a desire for the new shells, too.\textsuperscript{59} Yet this all occurred before the War Committee, a subset of the Cabinet and ultimate leaders of the war effort, approved such an escalation of the gas war.\textsuperscript{60} The government did not want to use lethal bombs or shells before the Germans did.\textsuperscript{61} In fact, prussic acid received a specific ban, separate from that on other fatal shells.\textsuperscript{62} Eventually, after the enemy released lethal gas shells at Verdun in 1916, the government approved retaliation in kind. It was willing to escalate the war if necessary. Britain could not fall behind in the war and lose any advantages inherent in the new stage of the chemical fighting, but the government did not want to broaden or deepen the scale of it. Britain wanted to match Germany’s chemical warfare efforts, but not to exceed them.\textsuperscript{63}

The British actually discontinued the use of jellite in late 1917 because they thought that, despite its reputation, it was not as effective as other chemicals.\textsuperscript{64} One famous anecdote tells how Mr Joseph Barcroft, to prove his point about prussic acid’s weakness, conducted a dramatic experiment. He and a dog sat in a gas chamber into which colleagues released a hydrocyanic compound. The dog quickly died, while the man remained conscious and unharmed. (One version recounted that the dog awoke during the night, shocking the scientists who had prepared to autopsy him.)\textsuperscript{65} In addition, jellite lost favor because the British gas policy changed and began to favor more persistent gases that threatened the enemy for a longer period of time.\textsuperscript{66}

The British, after all of their agonizing and frantic checking of the rumor mill, phased out the very gas that they had reluctantly endorsed – and because it was less lethal than other gases, not more. All through the discussion, the issue of image and legality remained. The scientists frantically worked to make jellite shells effective, and the Ministry of Munitions badgered the Navy in order to acquire manufacturing space, but they did so before they received final approval to use or even to ship the chemical to France. Yet, the British were not going to be unprepared to use jellite, if the need arose. The government, as much as it wanted to win the war, and thus as motivated as it was to use the most effective chemicals, did not want to
lose its moral position in the world or sink further towards barbarity by its selection of the methods used to achieve victory on the field.

The Decision to Expand the Gas War Geographically

Eventually belligerents used the gas on the Eastern Front and in Italy, and they threatened to use it elsewhere, too. In practice, when the British Army asked for permission to receive gas supplies and to use them on new fronts, the Cabinet approved. Simultaneously it discouraged the local commanders so that they, themselves, would have as little reason as possible to deploy gas. The government repeatedly allowed the generals autonomy, while guiding them to conservative decisions that agreed with the political policy to limit the scope of the gas war as much as possible without harming the nation’s chances for victory. The exchanges between London and the field in Africa and Gallipoli demonstrate this pattern.

The Gallipoli campaign, Winston Churchill’s pet, proved to be a disaster for the British war effort. It absorbed so much time at the Cabinet level that the body running the war, composed of the prime minister and his closest associates, became known at the Dardanelles Committee (a forerunner of the War Cabinet) for a time. At the 12 June 1915 meeting, six days after General Sir Ian Hamilton requested gas for the troops stationed at Gallipoli in case they were needed for retaliation, the Cabinet discussed the use of gas in the region as a means of improving the military situation there. Lord Kitchener replied that the troops already possessed defensive materials, such as masks. He then discouraged offensive use of gas because of the weather. Gas, at this point, still depended upon the wind for deployment. A windless day could delay an attack, while air blowing onto Britain’s own lines could create a danger from enemy gas as well as from backfire causing the equivalent of ‘friendly fire’. Lord Kitchener noted that meteorological conditions favored the enemy at Gallipoli: ‘the wind nearly always blew from the north-east in that region’ against the British position. Introducing gas would be foolhardy, he implied, because it would be inviting the Turks to retaliate in a situation in which they would have the upper hand climatologically.

Churchill disagreed. He argued that gas should be used, for two reasons. One was that the wind was not necessarily a problem; he argued that ‘the winter season is frequently marked by south-westerly gales’. The other was that he anticipated that the Turks would not have sophisticated anti-gas equipment; they would be easy targets.

Churchill was an outspoken and consistent proponent of gas, unlike many of his colleagues. In fact, he constantly urged that its use be increased
in scale, and Kitchener’s arguments did not dissuade him. In his War Committee notes of 20 October 1915 he stated:

I trust that the unreasonable prejudice against the use by us of gas upon the Turks will not cease. The massacres by the Turks of Armenians and the fact that practically no British prisoners have been taken on the Peninsula, though there are many thousands of missing, should surely remove all false sentiment on this point, indulged in as it is only at the expense of our own men. Large installations of British gas should be sent out without delay.\(^72\)

The fact that this strong champion of gas, who later served as minister of munitions, the person responsible for the supply of the toxins, did not dominate British policy regarding the weapon indicates the strength of the political resistance to escalating the chemical war. It is even more startling in the face of his persuasive encouragement to undertake the Gallipoli campaign. Whether because of his reputation for recklessness or the depth of his fellow politicians’ opposition to gas, Churchill did not win the point with regard to Gallipoli.

Kitchener therefore replied to Hamilton’s request on 22 June 1915 as follows, although emphasizing supply rather than political obstacles:

In case gas is used it is very important that you should have proper protection against it. For this purpose helmets have been found to be quite effective. We have sent you 60,000 up to yesterday, and a further consignment of respirators, one per man, is being sent with the XIIIth Division. Your request for gas has been forwarded to the Minister of Munitions, but as it has not been possible to provide sufficient gas up to the present for France, I doubt if there will be any for you for some time, but I will give you due notice. The wind … is, I understand, generally against you.\(^73\)

The story soon became more complicated. Hamilton’s further correspondence indicated that the danger of gas attacks by the Turkish force had grown, and finally London reluctantly and half-heartedly acceded to his request for gas weapons. On 3 August, Kitchener sent a telegram:

We have sent out a certain amount of gas to you. The use of gas by your troops on the Peninsula, where I understand that the wind is generally against you, is left to your discretion. Please let me know if you think of using it, as it may lead to retaliation. I understand that the Turks, although supplied with German gas, have refused to use it.\(^74\)
The rumors surfacing in the Gallipoli region partially explain the softening of policy. In July, Hamilton noted that: ‘We are accused of using gas by the Turkish War News of 4th July. This indicates that it is their intention of using gas shortly.’75 The commander recalled the stories circulating before the Germans first used gas at Ypres; at that time they had spread tales that the Allies had used gas against them in order to prepare a defense of retaliation when they themselves released chlorine a few weeks later.76

Yet Hamilton was aware of the political implications, as well as the military ones. After reporting the rumors, he said ‘As this [story] will in any case give us a bad name in the Islam world, I presume that you will contradict the statement, which is, of course, absolutely false.’77 He pressed Lord Kitchener a month later, offering diplomatic advice:

As Turkish official reports persist in false statement that we use asphyxiating shell, and as a sinister motive clearly underlies these German fabrications, would it not be worth while to appoint a small neutral Commission, consisting of men whose word would carry weight in their own countries, to come out here and made a full inquiry and report. I would grant every facility for examining ordnance supplies and documents and for visiting batteries in action. I am aware this would be troublesome both for War Office and myself, but it would be worth some pains to prove conclusively to the world that we have never used a single asphyxiating projectile. It is all very fine to say that virtue is its own reward, but why let enemy lies filch from our chivalrous troops the full credit for fighting in a clean-handed way.78

However, Hamilton demonstrated that he was more concerned about image than true ethical behavior. Like the politicians, in the end he did not want anything to interfere with military victory, even public relations. As a result, Hamilton sent a personal telegram to Kitchener following the one just quoted. ‘I hope you will publish my telegram. The reference to the Commission is made to show bona fides, but I do not, of course, press for any action to be taken . . . . I do feel that these reports should not be allowed to pass unchallenged.’79 He did recognize the military implications of gas use in Gallipoli, though, and confirmed to Kitchener that despite these publicity manipulations, he would not open the gas war in this theater.80

A few months later, the issue of geographical boundaries of the chemical war arose again, with similar results. By December 1915, the members of the Scientific Advisory Committee in the Ministry of Munitions were mulling over the idea of using gas in Africa as well as Mesopotamia. The scientists and their military chair, General Jackson, thought that chemical
weapons potentially offered the Army significant advantages. However, they decided to delay their official report and suggestions pending the arrival of ‘details as to climatic and geographical conditions and the possible pressure that would be produced inside the cylinders’. Their task, as scientific advisors, was to report on the technical nature of the war. While they could recommend policy, their power lay in applying their expertise to the new weaponry and coming to professional conclusions regarding it. Their professional opinions served as facts for the true policy-makers to consider.

Thus, despite the Scientific Advisory Committee’s suggestions, London did not immediately approve gas for use in East Africa. The scientists had considered it partially because South African Lieutenant-General Jan Smuts had recommended it to the Chief of the Imperial General Staff, and he, of course, was familiar with Africa. He thought that the weapon might be useful if the Germans and their allies ‘concentrated in an area where the campaign could be brought to a speedy end by the use of gas’.

The politicians resisted the military leaders and scientific experts by discouraging the widening of the chemical war. They did not tell the general that his forces could never use gas, but they emphasized technical – not political or diplomatic – reasons for abstaining; that is, they offered rationales that were difficult to combat. The War Office reply to Smuts therefore stated:

Use of gas in cylinders not considered advisable in sharply acci-
dented [sic] country, nor in very dense scrub nor long grass, and of
doubtful value in your local conditions owing to necessity of choos-
ing exactly favourable weather and difficulty of replacing used cylin-
ders. Also climate unsuitable for use of anti-gas appliances essential
to our troops… . Considerable difficulty in securing trained
personnel as one man per four cylinders is required. Present gas
cylinders… not strong enough to guarantee safety owing to
increased pressure from higher temperature but smaller stronger
cylinders weighing 50 pounds each would be possible. 3,000
required for one attack of 1,000 yard front. This number could be
despached in about 2 months.

Considering above do you still wish for gas?

The decision belonged to General Smuts, although it essentially was a theoretical one. He could not have the gas in a timely manner, did not have the personnel to release it, and did not enjoy the appropriate climate for using it. Smuts received the message and told the War Office, who passed it onto the politicians sitting on the War Committee, that he would decline to
request gas ‘in view of the technical difficulties outlined in the Conclusion of the War Committee on October 26th’.85

On the other hand, on 19 January 1917, the Cabinet permitted the Army to use gas shells in Egypt. The government explicitly justified this – a year after the evacuation of troops from Gallipoli – in terms of retaliation against the Turks in order to maintain a seeming continuity in their policy. Britain was not escalating the gas war, and thus barbaric behavior, gratuitously. The most intriguing factor in this decision was that the Cabinet was not reacting to gas use by the enemy, but to the commission of other ‘atrocities, [ones] perpetrated on subject races by the Turks and their maltreatment of Allied prisoners during the present war’.86

The British were not willing to go all out and pursue any and all chances for victory. Technological considerations indicated that gas would be a weak weapon in Gallipoli and parts of Africa. Those factors, combined with political reluctance to expand the gas war geographically meant that the politicians discouraged gas use outside of Europe, despite the requests of local, respected commanders. However, the policy against expanding the chemical war was not inviolate; revenge against inhumane behavior by an enemy who had already descended into barbarities provided a legitimate reason in politicians’ minds to use gas in a new arena. In the Egyptian case, though, the rationale was that gas was proportional retaliation, not a heedless expansion of gas use. This example emphasizes the unusual position gas had in the arsenal available to the combatants; technical practicality and morality had to be considered before using it.

**The Last Decision: To Continue or to Stop**

The British government may not have wanted to escalate the gas war, at least without justification, but it demonstrated that it did not want to end it either, if that meant leaving Britain in a vulnerable position. The leaders faced the challenge of refusing a 1918 Red Cross request to act humanely and abandon chemical weapons, something that may have been tempting because of Britain’s desire to appear, and remain, civilized despite the characteristics of the new war. Carefully, the British managed neither to acquiesce nor to appear barbaric by refusing the Red Cross.

In 1863 Henry Durant and Gustave Moynier founded a committee that evolved into the organization known today as the International Red Cross (IRC).87 They inspired 12 countries to sign the 1864 Geneva Convention for the Amelioration of the Condition of the Wounded and Sick of Armies in the Field, providing a binding agreement among several European nations and a legal basis for the charitable body.88
The Red Cross’s goals did not include preventing or ending war; it saw conflict as an inevitable outgrowth of civilization. Its mission was to make armed struggles as humane as possible, through international agreements that offered principles for the national branches of the Red Cross which in turn provided actual relief to the wounded. The organization developed an international appeal; its ruling body, located in Switzerland, governed 37 national branches by 1900.

The IRC actively sought to return World War I, widely recognized at the time as a war of novel scale and ferocity, to the level of a humane conflict. Repeatedly during 1914–18, the ruling committee requested that belligerent nations modify their behavior by ending mistreatment of prisoners, stopping the sinking of hospital ships, and, in 1918, appealing to combatants to end chemical warfare in a letter of 6 February.

The last was a daring step for the International Red Cross. The volunteer group had carefully defined its sphere of influence, and the areas of war into which it could intrude. It was, after all, a private group, not a governmental one. One of its boundaries was that it believed its mandate arose from the Geneva Convention, not other international laws such as the Hague treaties of 1899 and 1907. While the Red Cross offered medical and other care to participants in the war, it was the role of The Hague agreements to proscribe the parameters of the fighting, such as unnecessarily cruel weapons and chemical armaments. Poison gas, though, in the philanthropists’ eyes, was a tool of war that existed on a plane by itself. It alone inspired the Red Cross to violate its own rules and interfere on behalf of an international treaty that it did not have the right, per se, to enforce. As one scholar of the organization noted, the constant escalation of chemical warfare frightened the International Committee; it feared the developments that might occur later such as ‘chemical warfare via long-range artillery and aircraft bombing, [and the members] decided to dispense with legal proprieties and make their revulsion unmistakable’. They argued that the progress of chemistry increased suffering and endangered populations, so the request ended with a call for belligerents to stop this atrocious form of warfare. However, as a British document noted: ‘The Swiss proposal is ostensibly based on humanitarian grounds: on these grounds the use of liquid fire, attacks on hospital ships and the bombardment of open towns are equally indefensible.’

The Red Cross took a risk; combatant nations could have noted that it did not have any authority to challenge methods of warfare, ignoring the IRC and denting its prestige. By 1918, though, it had been in existence for 55 years. In that time it had built up a global reputation as a care-giving and humanitarian organization. If anyone were to speak out against barbarous
behavior, it would seem to be the right of a group that stood for civilized action. No nation could stand on the same moral ground as the Red Cross; even Britain could not say that both her behavior and her conscience were completely clean. Furthermore, it was difficult, as Britain knew from her propaganda efforts, to argue against a body with moral authority, even if that group did not have legal authority or even physical force on its side. Adding to the awkwardness was the fact that Britain had a national Red Cross society of her own and had signed the Geneva Convention indicating that she supported the goals of humanizing warfare. As a result, Britain could not simply dismiss the Red Cross’s call to stop chemical warfare.

By this time, however, Britain and the other Allies were voracious users of chemical weapons. In fact, overall the amount of gas used by the armies increased annually during the war. Stopping would waste munitions, change tactics and battle plans, and most importantly, involve risk. If Germany did not abandon gas warfare, and Britain did, how would that effect Britain’s goal of victory? If the enemy did stop using chemicals, Britain would be in the moral position Germany endured in April 1915: she would be the international outlaw.

There were other complications, too. What, exactly would be banned by a chemical warfare agreement? Projectiles with the primary purpose of releasing asphyxiating gas had been outlawed in The Hague treaties and that had not stopped Germany. Partially, that was because Germany did not feel the need to adhere to many international treaties, such as the one that protected neutral Belgium, but also because she twisted through legal loopholes. Chemical weapons were still changing rapidly, so how could present and future forms be envisioned, let alone outlawed, in 1918? Even worse, if the Red Cross were successful with this appeal, what would it try to ban next?

Understandably, the British government delayed responding to the appeal and carefully investigated its options. She found herself juggling the military and public relations consequences of heeding or rejecting the Red Cross request. Britain also had to second-guess the motives behind the petition: would she be playing into Germany’s hands if she agreed or dismissed it? The British intelligence network proposed that the information that spurred the Red Cross to make its request, the rumor that Germany was about to escalate the chemical war with a particularly horrifying mysterious gas, was suspect. Britain wondered if Germany herself was promoting the gossip in order to provoke the Red Cross to make a demand upon Britain that would be hard to refuse.

The Red Cross based its appeal not only on humanitarian grounds, which were difficult to ignore, but also on scientific and legal ones. The
IRC indicated that the science’s potential added to the charity’s incentive to intervene in an unprecedented manner with regard to the tools of warfare. Science, at that point in time, relieved some suffering but proved it had the ability to increase misery also. Regarding legality, the IRC further noted that The Hague Convention of 1907 had outlawed unnecessarily cruel weapons, ones seen as needlessly inhumane. By citing this treaty, the Red Cross applied legal pressure.

British experts, in turn, investigated the laws that bound their nation. A government memorandum on the ‘Legal aspect of the use of POISON GAS [emphasis in original]’, discussed the history of chemical warfare and Britain’s legal options in 1918. The authors suggested that Britain could, technically, ‘legitimately continue to employ it [gas] in the present war if they consider[ed] it advantageous to do so’ since Germany ‘commenced to use it’. Britain could engage in retaliation; Germany’s first use of gas abrogated the Allies’ agreements in the Hague treaties to refrain from wielding that weapon.

The Red Cross had one more card, though; it augmented the strength of its appeal by addressing it to all of the belligerents. The need to consider her Allies’ viewpoints added pressure on Britain. The latter wanted to write a joint answer that would be supported by all the Allies and ultimately sent to the Red Cross in order to present a united front. That by itself was not a problem, but Britain wanted that response to be the one she herself desired. To that end she supported Allied discussions of the subject directed at drafting a unanimous reply.

The British Army Council recommended rejection of the Red Cross proposal on several grounds. It noted that the Germans began the chemical war, surprising the Allies, but now that their opponents had caught up and surpassed them in effectiveness, the foe faced operating at a disadvantage. Abandoning gas would greatly benefit the enemy. The commanders also stated that they ‘consider[ed] it would be impossible to arrive at a satisfactory definition of the gases to be prohibited’. Furthermore, ‘the Council are of opinion that it would be impossible to obtain any adequate guarantee from the Germans that they would not employ gas again at some future date if the Allies agreed to renounce its use’. They expected that Germany would continue to lie and act treacherously; after all, she had previously claimed that Britain used gas as grounds for her own deployment of the weapon. As one official noted, ‘The Germans could, at any moment, if they chose, resume gas attacks, justifying their action by an alleged breach of the Allies’ guarantee, or they might contrive to manufacture a new form of gas falling outside the scope of the definition of prohibited gases.’
Nor would there be any relaxation for the Allied soldiers: ‘In any case the troops would have to carry gas masks in order to safeguard themselves against a surprise gas attack, and it would be necessary to maintain the supply of gas and of the machinery for discharging it in case the necessity for resuming its use should arise.’ There would be no military benefit in acquiescing to the Red Cross proposal.

Relying partly upon a French and British military proposal, a contingent of servicemen from France, Belgium, Britain, Italy and the United States, as well as a Portuguese minister, agreed on a united recommendation. They ‘based [their decision] on purely military considerations’, knowing that the politicians might not follow their advice. The armies’ representatives did not dismiss the request out of hand; they acknowledged the humanitarian impulses of the Red Cross, and noted dislike of science’s role in brutalizing the war, yet they emphasized that blame should be placed on Germany for the chemical component. They indicated the low opinion they held of the Germans: ‘With any other adversary, had such a question been possible, the Allied Powers would not hesitate to give their agreement without reservation. They agreed in 1899 and 1907 [at The Hague Conferences] and are ready to pledge themselves with any one whose word is kept.’ They finished with an eloquent plea, one that allowed the Allies to maintain the high moral ground of agreeing to act in the most humanitarian way possible: they would like to support the Red Cross, if it would undertake a guarantee that Germany would keep the agreement – an impossible task for the IRC. Thus the military managed to appear willing to acquiesce, but did so in such a way that it sustained its reputation, protected its military position, and did nothing. The officers finished their statement with a comment that even justified the Allied role in the war once more:

In spite of all, if the German Government today declares that it adheres to the Committee’s proposal and offers detailed and effective guarantees that an agreement to discontinue the use of gas will be observed, the Allied Governments will not refuse to examine its proposals in the most liberal spirit. But without such guarantees, the Allied Governments would fail in their duty in not having recourse to every means of depriving their opponents of their power to harm.

The French government indicated that it supported the military pronouncement. The British and the other Allies concurred. The Germans offered a similar response and stalemated the Red Cross proposal. It was not until after the war that countries accepted the IRC’s goal in an international treaty banning chemical warfare, the Geneva Protocol of 1925. It simply proved too hard to change the course of the war.
during the conflict, when so much distrust had built up and when the immediate consequences of misjudgments and vulnerabilities could mean losing the war. The Red Cross had a powerful tool: moral authority. It even presented arguments that echoed many of the beliefs held by the British at various times, such as the barbarity and immorality of chemical warfare. Britain, however, put her mission to win the war first, but she struggled to do so in such a way that she did not lose face herself, at home or abroad.

Britain’s politicians struggled to maintain the nation’s position as a viable belligerent while remaining a civilized country. They could not avoid descending to the enemy’s level of barbarity, but they tried to limit and even mask this by matching escalations in the gas war, not initiating them. Even after victory, Britain struggled with her gas policies during the interwar period; then it was public opinion and personal dislike that most influenced her politicians’ restrictions on gas use, eventually leading the nation to embrace the global taboo against chemical weapons that still exists today.119

NOTES

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1 ‘Latest News’, Scotsman, 26 April 1915, p.7; F.L., ‘Science Jottings: War by Chemicals, and Reprisals’, Illustrated London News, 22 May 1915, p.672. Wyndham Miles also discusses changes in chemistry leading up to the use of poison gas and as well as flirtations with the idea of chemical weapons between the late eighteenth century and World War I. Wyndham D. Miles, ‘The Idea of Chemical Warfare in Modern Times’, Journal of the History of Ideas 31 (April–June 1970) pp.297–304. It appears that the French released gas on the Western Front and the Germans deployed it against Russia on the Eastern Front before April 1915, but both used tear gases. The extent of the French use is unknown but seems to have been small and relatively harmless. The German attack was largely unsuccessful because most of the gas froze. Regardless, because these were not toxic gases, the German offensive with chlorine gas on 22 April 1915 at Ypres is accepted as the documented, first use of poison gas on the battlefield. Ulrich Trumpeter, ‘The Road to Ypres: The Beginnings of Gas Warfare in World War I’, The Journal of Modern History 47 (Sept. 1975) pp.462–463 and 469.

2 There had been some intelligence that hinted that the Germans might introduce gas, but the Army did not believe it. Donald Richter, Chemical Soldiers: British Gas Warfare in World War I (Lawrence: UP of Kansas 1992) p.8.


‘Legal Aspects of the Use of Poison Gas’ (note 7) p.2.


Miles (note 1) pp.297–304.

Ibid. p.298.

Hartcup (note 3) p.95.


Ibid.


Asquith to King George V, 27 April 1915, CAB 37/127/40, also listed as CAB 41/36/18, PRO.

Hartcup (note 3) p. 94.

Sir John French to Lord Kitchener, 23 April 1915, p.20, WO 142/240, PRO.

Lord Kitchener to Sir John French, 24 April 1915, pp.20–1, WO 142/240, PRO.

Ibid.


34 Cabinet 61 (32), 16 Nov. 1932, p.14, CAB 23/73, PRO.

35 United Kingdom, Parliamentary Debates, Lords, Vol.18 (1915) cols.1017–18.


37 In a 1919 memo, the legal adviser to the Foreign Office stated that ‘the use of poison gas by the Allies has hitherto been justified as an act of retaliation against the enemy’. This makes sense in terms of traditional interpretations of wartime behavior, although Richter says that the Hague treaty did not explicitly permit retaliation. C.J.B. Hurst, Copy of memorandum, 4 Sept. 1919, in War Cabinet Paper G.T. 8110 ‘Future Employment in Warfare of Asphyxiating Gases’, 5 Sept. 1919, p. 1, CAB 24/88, PRO; Richter (note 2) p.17; Frank Holland, ‘Sowing the Wind,’ John Bull, 15 May 1915, p.17.

38 For example, see ‘Deadly Bronchitis kills Victims of Huns Poisonous Gases’, Daily Sketch, 29 April 1915, p.4.


40 Appendix II: ‘Dropping of Germs from the Air in War Cabinet Meeting 59’, 9 Feb. 1917, pp.6–9, Lloyd George Collection, File F/103, House of Lords Record Office, hereafter HLRO.

41 A. Stopford to Controller, Chemical Warfare Department, 4 July 1918, WO 142/136, PRO.

42 Foulkes, “Gas!” (note 6) p.20.

43 Section II: ‘Work of the Scientific Advisory Committee (23rd June 1915–2nd Feb., 1916),’ Porton Historical, pp.41-2, WO 142/246, PRO; ‘List of Gases Used or Proposed,’ Quinan Papers, Ministry of Supply (SUPP) 10/127, PRO; and Chemical Advisory Committee Minutes VI, 5 April, 1916, WO 142/57, PRO.

44 For a discussion of poison ivy, see No. 90 Report 7–13 Feb., 1918, pp.2–3, WO 142/76, file 2, PRO.

45 The Admiralty began examining it, which inspired the Ministry of Munitions scientists. H. Moreland, ‘Chemical Warfare Record of Chemical Supplies for Offensive Purposes,’ c. June 1918, p.211, WO 161/1, PRO.

46 Report No. 4 of the Chemical Advisory Committee, 4–8 April 1916, pp.1–2, WO 142/76, Folder 1, PRO.

47 Copy of FO telegram no. 38 forwarded to Lloyd George in Doc. 5/7-(10), 15 Jan. 1916, CAB 1/14/28 Misc., PRO.

48 Report No. 4, 4–8 April 1916, WO 142/76, PRO.


50 Note that although ‘repeated reports were received from many different sources throughout the War as to the contemplated use of this offensive agent by the enemy, it was never actually employed, nor does it appear to have been manufactured by the enemy for War purposes. It is worth noting that these reports were most frequent immediately prior to the use of a new filling by the enemy. It appears very probably that most of the reports were of German origin and were issued with the purpose of misleading the Allies as to their real intentions.’ Ibid.

51 Even scientists were convinced that it was a serious threat. Chemical Advisory Committee Minutes X, 7 Dec. 1916, p. 117, WO 142/67, PRO.

52 In Jan. 1917, a German prisoner indicated that he had been told by his superiors that neither side could protect against prussic acid yet. Auld to Director of Gas Services, Examination of a Prisoner of War of 10th Machine Gun Marksmen Detachment Captured 11.1.17 in the Neighbourhood of Beaumont-Hamel, 22 Jan. 1917, WO 142/36, PRO.

53 H. Moreland, ‘Chemical Warfare Record of Chemical Supplies for Offensive Purposes’, c. June 1918, pp.211– 12, WO 161/1, PRO.

54 Ibid. pp. 211, 212 and 216.
Great Britain, \textit{History of the Ministry of Munitions} (note 31) p.5. Politicians were particularly concerned about escalation. Munitions shortages also contributed to the military’s delay in launching lethal shells.

Hankey to Lloyd George, 10 March 1916, Lloyd George D/22/2/28, HLRO; Du Cane to Minister of Munitions, 24 July 1916, MUN 4/2709, PRO.

Great Britain, \textit{History of the Ministry of Munitions} (note 31) p.5.


Hartcup (note 3) p.102; H.A. Sisson, \textit{On Guard Against Gas: An Account of the Principles of Gas Warfare and of the Steps to Be Taken by the Ordinary Citizen to Defend his Family} (London: Hutchinson c.1941) p.18.

H. Moreland, ‘Chemical Warfare Record of Chemical Supplies for Offensive Purposes, April 1915-1916,’ p. 217, WO 161/1, PRO.

Hamilton to War Office, Telegram 1A, 6 June 1915, WO 32/5172, PRO; Dardanelles Committee Meeting, 12 June 1915, p. 7, CAB 42/3/2, PRO.

Ibid, Dardanelles Committee Meeting, 12 June 1915 (note 67).

The British came to the conclusion in other places that the Germans made this mistake on the Western Front. While the British portion of the line suffered from a high water table in comparison with the German trenches, it also had the advantage of having the wind blowing in the right direction for gas deployment more often than it did for the Germans. Foulkes, “Gas!” (note 6) p.315.


Dardanelles Committee Meeting, 12 June 1915 (note 67) p.7.

Churchill, ‘War Committee Notes’(note 70).

Kitchener to Hamilton, Telegram 3A, 22 June 1915, WO 32/5172, PRO.


Hamilton to Kitchener, Telegram 6A, 8 July 1915, WO 32/5172, PRO.


Ibid.

Hamilton to Kitchener, Telegram 10A, 4 Aug. 1915, WO 32/5172, PRO.

Hamilton to Kitchener, Telegram 11A, 4 Aug. 1915, WO 32/5172, PRO.

Hamilton to Kitchener, Telegram 12A, 4 Aug. 1915, WO 32/5177, PRO.

Chemical Sub-Committee Minutes V, 22 Dec. 1915, WO 142/56, PRO.

Minutes of Meeting 126 of the War Committee, 26 Oct. 1916, CAB 42/22/8, PRO.

Ibid.

War Office to Gen. Smuts, 30 Oct. 1916, in War Committee Minutes, CAB 42/22/8, PRO.

War Committee Meeting, 31 Oct. 1916, CAB 42/22/13, PRO.

War Cabinet 38, 19 Jan. 1917, CAB 23/1, PRO.


Ibid. p.8.

The Society’s influence has encouraged international treaties and organizations, especially after World War I, that work against the existence of war itself. The Red Cross itself never
did that, partially because ‘It was created in order to mitigate the consequences of war; and, in order to concentrate its strength upon that task – which it can only discharge with the consent and good will of the governments that make war – it has to accept war itself as a cataclysm arising out of the nature of the world in which its duties are undertaken… it remains by its nature an intervention by a power that repudiates the spirit of war, serves a higher cause, and appeals to profounder sanctions.’ Dermot Morrah, *The British Red Cross* (London: William Collins 1944) pp.18–19. See also Caroline Moorehead, *Durant’s Dream: War, Switzerland, and the History of the Red Cross* (London: HarperCollins 1998) pp.21–2.

90 Berry (note 87) p.8.


93 Willemin and Heacock (note 91) p.20.

94 Hutchinson (note 92) p.283.

95 Ibid. p.284.

96 The original language was: ‘on peut dire que les progrès de la science dans … la chimie, n’ont fait qu’en aggraver les souffrances et surtout les étendre à toute la population, en sorte que la guerre ne sera bientôt plus qu’une oeuvre de destruction générale et sans merci…’ and “… nous n’hésitons pas à demander hautement qu’on renonce à cette manière atroce de faire la guerre,” Le Comité International de la Croix Rouge aux Belligérants, ‘Appel Contre L’Emploi des Gaz Vénéneux’ (note 92).

97 ‘Legal aspect of the use of POISON GAS’ (note 7) p.3.

98 After the war, the International Red Cross did continue to encourage international treaties that outlawed poison gas. In the 1925 Geneva Protocol, for example, it achieved part of its goal. Willemin and Heacock (note 92) p. 23.


100 ‘Legal aspect of the use of POISON GAS’ (note 7) p.3.

101 War Cabinet Meeting 355, 27 Feb. 1918, CAB 23/5, PRO.

102 The original language was: ‘L’un des caractères les plus douloureux de la guerre qui desole actuellement l’humanité, c’est la violation journalière des conventions les plus solennelles, de ce qu’on a appelé les lois de la guerre, de ces accords par lesquels on espérait en diminuer la cruauté. Bien loin d’atténuer les maux qu’entraine la guerre, on peut dire que les progrès de la science dans l’aéronautique, la balistique ou la chimie, n’ont fait qu’en aggraver les souffrances et surtout les étendre à toute la population, en sorte que la guerre ne sera bientôt plus qu’une oeuvre de destruction générale et sans merci’, International Red Cross, Appel Contre L ’emploi des Gaz Vénéneux, 6 Feb. 1918, WO 32/5177, PRO.

103 Untitled document begins ‘On the 7th February 1918 …’, n.d., WO 32/5177, PRO.

104 ‘Legal aspect of the use of POISON GAS’ (note 7).


106 Untitled document (note 103) p.3.

107 Ibid.

108 Ibid.


110 Untitled document (note 103) p.3.

111 Ibid. and Document 19A, undated, WO 32/5177, PRO.

112 G.T. 4077: War Cabinet on Asphyxiating Gases, 26 March 1918, WO 32/5177, PRO.

113 Ibid. p. 2, quoting from ‘Prepared answer of Allied Governments to Geneva Red Cross, S.W.C. 143’.

114 Ibid. p.3.

De Margerie to British Ambassador to Paris, 2 April 1918, copy of letter, contained in G.T. 4220, War Cabinet, ‘Use of Asphyxiating Gases’ 13 April 1918, WO 32/5177, PRO.

Moorehead (note 89) p.255.


See Marion Girard, A Strange and Formidable Weapon: British Responses to World War I Poison Gas, forthcoming in Spring 2008 from the University of Nebraska Press for further discussion.